UNITED NATIONS

SECRETARIAT

ST

GENERAL

ST/SG/AC.10/4/Add.1
10 January 1979

Original: ENGLISH

COMMITTEE OF EXPERTS ON THE TRANSPORT OF DANGEROUS GOODS

REPORT OF THE COMMITTEE OF EXPERTS ON ITS TENTH SESSION
(4 - 13 December 1978)

Addendum 1

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Annex 1

SCOPE OF THE RECOMMENDATIONS
(ST/SG/AC.10/1/Rev.1 - Chapter 1)

Amendments adopted by the Committee

Paragraph 1.12

Read the definition of Division 1.5 as follows:

"Division 1.5 Very insensitive substances which have a mass explosion hazard

This Division comprises explosive substances which are so insensitive that there is very little probability of initiation or of transition from burning to detonation under normal conditions of transport. As a minimum requirement they must not explode in the external fire test (see 6.03).

NOTE. The probability of transition from burning to detonation is greater when large quantities are carried in a ship."

Paragraph 1.23

Read the definition of Division 6.2 as follows:

"Division 6.2 Infectious substances

Substances which are infectious or are reasonably suspected to be infectious for man or animals."

Paragraph 1.27

Insert in this paragraph:

"This class comprises:

Division 9.1 Miscellaneous substances not falling within the other Classes or the other Division of this Class.

Division 9.2 Lachrymatory substances not falling within any other Class."

Paragraph 1.42

Amend the two first lines of the fourth column of table of precedence as follows:

3	I	NO CHANGE	NO CHANGE	6.1	3	3	3	3	NO CHANGE
3	II			6.1	3	3	3	3	

ANNEX 1

SPECIAL PROVISIONS RELATING TO INDIVIDUAL UNNUMBERED AND ARTICLES
(ST/SG/AC.10/1/Rev.1 - Chapter 3)

Amendments proposed by the Secretariat

(1) Addition

167 Nitrocellulose with not less than 12.6 per cent nitrogen by weight, or not less than 12 per cent plasticizing substance by weight, but not exceeding 12.6 per cent nitrogen by dry weight, packed in receptacles so constructed that explosion by reason of increased internal pressure is not possible may be appropriately classified in Division 4.1 (Serial number 2556 or 2557).

106 Classified as dangerous for air transport only.

107 If the sender declares that the consignment has no self-heating properties, it may be carried as a non-dangerous article.

109 Arrangements for the carriage of this substance must conform to the provisions of Chapter 2, paragraph 2.8.

110 Packing to be determined by the competent authorities.

112 Packing Group according to the corrosivity criteria.

113 The carriage of chemically unstable mixtures should be prohibited.

114 This substance may be carried in quantities not exceeding 500 grammes.

115 The carriage of this substance

mechanically produced having a particle size less than 7 microns; and
chemically produced having a particle size less than 10 microns

should be prohibited in the dry state.

This substance

mechanically produced having a particle size above 53 microns; and
chemically produced having a particle size above 340 microns

is considered as not dangerous.

117 Classified as dangerous only in the case of carriage by sea.

118 The detonating fuze must incorporate protective features such that it is very unlikely to cause detonation of a contrivance in the conditions encountered in transport (paragraph 3.60 "Initiation, means of ... (2)").

119 Exempt if containing less than 12 kg non-inflammable, non-toxic liquefied gas.

120 The nickel is precipitated on a carrier and a special activator.

121 This substance when packed in P20x, P24 or P2[illegible] requires for safety reasons control temperatures below +20°C (see indicated control temperatures). Because of the inherent safety characteristics of this very dilute dispersion the emergency temperature is permitted to be higher than that allowed by table 11.2 in Chapter II.

122 Trial quantities of new or new formulations of existing organic peroxides in consignments not exceeding 500 kg. should be carried only under conditions specifically designated by the competent authorities of at least the country of origin and the country of destination.

123 This substance is considered dangerous for air and sea transport only. For air transport, packagings must meet Packing Group I requirements.

124 Substances under this entry should be essentially dangerous to humans or to humans and animals and for which notification of a public health authority is desirable in the event of a spillage.

125 Substances under this entry should be essentially dangerous to animals only and for which notification of a veterinary authority is desirable in the event of a spillage.

126 Sodium percarbonate dihydrate, is considered as non-dangerous.

127 Other inert material or inert material mixture may be used at the discretion of the competent authority, provided this inert material has identical phlegmatizing properties.

128 Full information respecting the schedule and its contents may be found in the IAEA Regulations for the Safe Transport of Radio-active Materials.

129 Packing Group I, II or III according to grouping criteria for each hazard.

130 Packing Group I or II according to grouping criteria for each hazard.

(2) Amendment

Replace existing special provision 55 by:

"55 These mixtures, if nitric acid content is:

more than 50 per cent, should be placed in Packing Group I and carry a subsidiary risk label of Division 5.1;

not more than 50 per cent, should be placed in Packing Group II and not carry a subsidiary risk label."

Replace existing special provision 77 by:

"77 Samples of new or existing organic peroxides in quantities not exceeding 10 kg per consignment on the condition that they are not more hazardous than any organic peroxide already listed. The conditions of transport should be approved by the competent authority of the country of origin. The control temperature should be in accordance with paragraph 11.5 and subsequent relevant paragraphs."

Replace existing special provision 100 by:

"100 Exempt if containing 60 per cent or more inert inorganic solids and in packages containing not more than 100 kg in the whole package."

(3) Deletion

Delete special provisions Nos. 65, 66, 69, 74, 84, 87, 93, 95, 95 and 99.

Annex 4

SPECIAL RECOMMENDATIONS RELATING TO CLASS 1
(ST/SG/AC.10/1/Rev.1 - Chapter 4)

The Committee adopted annex 5 of document ST/SG/AC.10/C.1/2 for inclusion into ST/SG/AC.10/C.1/R.1/Rev.1, after having made the following changes:

Under "Test series 1", read (c):

"(c) A combustion test or a thermal test (e.g. a Koenen test)."

Under "Test series 2", read (c):

"(c) A stability test.",

and decided to send back this document for further study to the next session of the Group of Experts on Explosives.

Amendments adopted by the Committee

Paragraph A.(2)

Replace the existing description of "Boosters (caps)" by:

"Boosters (caps)

Articles containing a detonating explosive and used to increase the initiating power of detonators or detonating cord (fuse)."

Replace the description of "Explosives, blasting, type B" by:

"Explosives, blasting, type B

Blasting explosives which are mixtures of ammonium nitrate or other inorganic nitrates with explosives such as trinitrotoluene, with or without other substances such as wood-meal and aluminium powder; or mixtures of ammonium nitrate or other inorganic nitrates with other combustible substances which contain no explosive ingredients. */ These explosives shall not contain nitroglycerin, similar liquid organic nitrates, or chlorates.

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*/ The 'explosive ingredients' are 'explosive substances' as defined in paragraph 1.11."

Figure A.1

In column "J" insert "1.1 J" opposite Hazard Division "1.1" and insert "1.2 J" opposite Hazard Division "1.2".

Figure 4.2

Amend the definitions of Compatibility Groups E and F as follows:

(a) Compatibility Group E. Add at the end of the definition: "(other than one containing an inflammable or hypergolic liquid)";

(b) Compatibility Group F. Read: "Article containing secondary detonating explosive, with its own means of initiation, with a propelling charge (other than one containing an inflammable or hypergolic liquid) or without a propelling charge".

Annex 5

SPECIAL RECOMMENDATIONS RELATING TO CLASS 3
(ST/SG/AC.10/1/Rev.1 - Chapter 5)

Amendments adopted by the Committee

Paragraph 5.3

Replace existing text by:

"5.3 Table 1 should be used for the determination of the hazard grouping of a liquid that presents a risk due to inflammability. For liquids whose only hazard is inflammability, the packing group for the material is the hazard group shown in the table below. For a liquid possessing an additional hazard(s), the hazard group determined from table 1 below and the hazard group based on the severity of the additional hazard(s), should be considered. In such cases, the table of precedence of hazard characteristics appearing in paragraph 1.d.2 should be used to determine the correct classification of the liquid. The most severe hazard grouping based on the different hazards of a material should then be the packing group for the material.

Table 1

Hazard Grouping based on Inflammability

Packing Group	Flash Point (Closed-cup)	Initial Boiling Point
I	< 23°C	≤ 35°C
II	< 23°C	> 35°C
III	≥ 60.5°C	> 35°C

Viscous substances having a flash point below 23°C may be placed in Packing Group III in conformity with paragraphs 5.5 and 5.6."

Paragraph 5.5

Read title:

"Determination of grouping of inflammable viscous substances with a flash point of less than 23°C"

Read the end of second line:

"... with a flash point of less than 23°C."

Paragraph 5.6

Read beginning of paragraph:

"Viscous inflammable liquids such as paints, enamels, varnishes, adhesives and polishes with a flash point below 23°C are grouped in Group III provided that:"

Annex 6

SPECIAL RECOMMENDATIONS RELATING TO CLASS 6
(ST/SG/AC.10/1/Rev.1 - Chapter 6)

amendments adopted by the Committee

Replace existing chapter 6 by the following:

"SPECIAL RECOMMENDATIONS RELATING TO CLASS 6

PART A - DIVISION 6.1
POISONOUS (TOXIC) AND INFECTIOUS SUBSTANCES

Criteria for defining toxicity

6.1 The substances of Division 6.1 including pesticides have been allocated among three groups according to the degree of their toxic hazards in transport.

6.2 In making this grouping, account has been taken of human experience in instances of accidental poisoning, and of special properties possessed by any individual substance, such as liquid state, high volatility, any special likelihood of penetration, and special biological effects.

6.3 In the absence of human experience the grouping was based on the available data from animal experiments. When a substance exhibits a different order of toxicity by two or more routes of administration the highest degree of toxicity was used in making the allocation.

In the case of inhalation toxicity three sets of criteria, as defined in table 6.4 (b) are available. At least data of LC_{50} and boiling point should be used for assigning a substance to its packing group. When additionally correct data of toxic point and vapour concentration at 20°C are available the assignment of packing group should be based on agreement between any two of these techniques. If the techniques used give different results the substance should be placed into the highest indicated hazard group.

6.4 The criteria for the three routes of exposure are as follows:

Table (a) For all toxic substances

Group	Oral toxicity LD_{50} (mg/kg)	Dermal toxicity LD_{50} (mg/kg)	Inhalation toxicity by dusts and mists LC_{50} (mg/l)
I	$\leqslant$ 5	$\leqslant$ 40	$\leqslant$ 0.5
II 1/	> 5-50	> 40-200	> 0.5-2
III	Solids: > 50-500 Liquids: > 50-2 000	> 200-1 000	> 2-10

1/ Those gas substances are included in group II which at the base relation to them do not correspond to the values shown.

Table (b) Additional for volatile toxic substances

Group	Criteria based on LC_{50} and		
	Toxic point A	Boiling point B	Vapour concentration at 20°C C
I	$\leqslant$ 2.7	$\leqslant$ 4.5	$\leqslant$ 50
II _/	> 2.7-3.6	> 4.5-5.7	> 50-500
III	> 3.6-5.1	> 5.7-6.9	> 500-5 000

_/ Tear gas substances are included in group II even if the data relating to them do not correspond to the values shown.

6.5 Definitions

(a) LD_{50} for acute oral toxicity

That dose of the substance administered which is most likely to cause death within 14 days in one half of both male and female young adult white rats weighing about 200-300 grams. The number of animals tested shall be sufficient to give a statistically significant result and be in conformity with good pharmacological practices. The result is expressed in milligrams per kg body weight.

(b) LD_{50} for acute dermal toxicity

That dose of the substance which, administered by continuous contact for 24 hours with the bare skin of the rabbit, is most likely to cause death within 14 days in one half of the animals tested. The number of animals tested shall be sufficient to give a statistically significant result and be in conformity with good pharmacological practices. The result is expressed in milligrams per kg body weight.

(c) LC_{50} for acute toxicity on inhalation

That concentration of vapour, mist or dust which, administered by continuous inhalation to both male and female young adult white rats weighing about 200-300 grams for one hour, is most likely to cause death within 14 days in one half of the animals tested. If the substance is administered to the animals as dust or mist, more than 80 per cent of the particles available for inhalation in the test must have a diameter of 10 microns or less, provided that it is reasonably foreseeable that such concentrations could be encountered by man during transport. The result is expressed in milligrams per litre of air for dusts and mists or in millilitres per cubic metre of air (parts per million) for vapours.

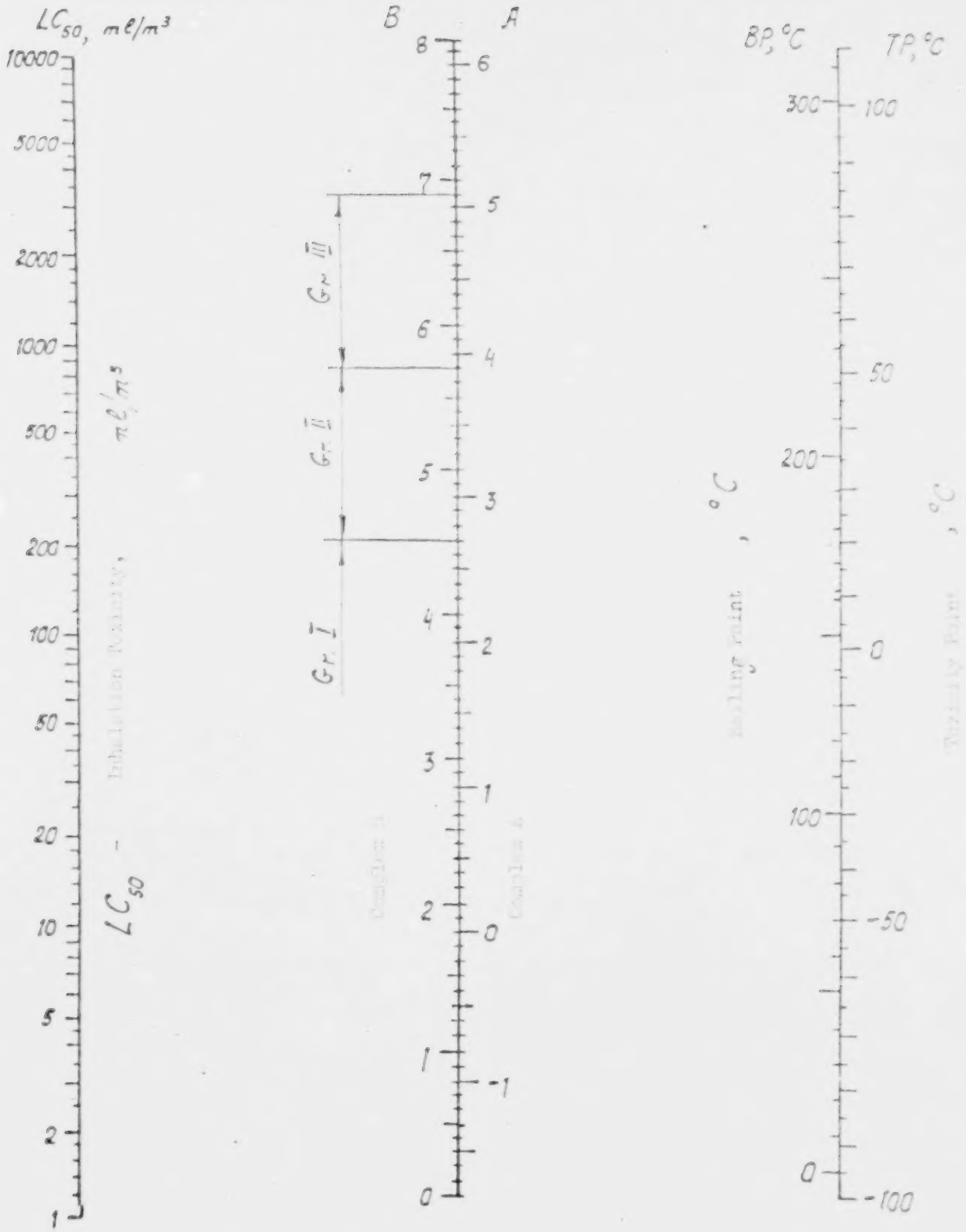
(d) A-complex toxicity criteria based on the substance's LC_{50} and toxic point (T_p)

This is a combined parameter for the degree of the inhalation toxicity of the substance, calculated from the equation:

$$A = \lg LC_{50} + 0.0018\ T_p$$

where: T_p (toxic point) is that temperature of the substance at which its saturated vapour concentration is equal to LC_{50}.

A-complex may be estimated by the use of the nomograph shown.


LC_{50}, mℓ/m³
10000
5000
2000
1000
500
200
100
50
20
10
5
2
1
LC_{50} - Inhalation Toxicity, mℓ/m³
B
A
8
7
6
5
4
3
2
1
0
6
5
4
3
2
1
0
-1
Gr. III
Gr. II
Gr. I
BP, °C
TP, °C
300
200
100
0
100
50
0
-50
-100
°C
Boiling Point, °C
Freezing Point, °C

(e) B-complex toxicity criteria based on the substance's LC_{50} and boiling point (BP)

This is a combined parameter for the degree of the inhalation toxicity of the substance, calculated from the equation:

$$B = \lg LC_{50} + 0.0123\ BP$$

B-complex may be estimated by the use of the nomograph shown.

(f) C-complex-toxicity criteria based on the substance's LC_{50} and volatility

This is a combined parameter for the degree of the inhalation toxicity of the substance, calculated from the equation:

$$C = \left(\frac{LC_{50}}{V}\right)^2$$

where: V is volatility, i.e. the saturated vapour concentration of the toxic substance at 20°C, in ml/m³.

6.6 Substances and preparations used as pesticides

Packing group I: substances and preparations presenting a risk of very severe poisoning, as specified in table 6.1.

Packing group II: substances and preparations presenting a risk of severe poisoning, as specified in table 6.1.

Packing group III: harmful substances and preparations, as specified in table 6.1.

Notes to packing groups I, II, III

(a) All active substances and their preparations used as pesticides shall be classified under packing groups I, II and III in accordance with the criteria of 6.4.

(b) If only the LD_{50} value of the active substance is known and not that of the preparations of that active substance, the preparation may be classified under packing groups I, II and III, using table 6.1, where the figures shown in the columns I, II and III represent the percentage of active pesticide substance in the preparations.

(c) For substances which are not named in table 6.1, and for which only the LD_{50} value of the active substance is known and not the LD_{50} values of the various preparations, the classification of a preparation may be determined from the table in 6.4, using the LD_{50} value obtained by multiplying the LD_{50} value of the active substance by $\frac{100}{x}$, x being the percentage of active substance by weight, according to the following formula:

$$LD_{50} \text{ value of the preparation} = \frac{LD_{50} \text{ value of the active substance} \times 100}{\text{percentage of active substance by weight}}$$

(d) The classification according to Notes (b) and (c) above shall not be used when the preparations contain additives which affect the toxicity of the active substance or when a preparation contains several active substances. In such cases, the classification shall be based on the LD_{50} values of the preparation in question according to the criteria of 6.6. If the LD_{50} values are not known, the substance shall be classified under packing group I.

Segregation from foodstuffs

6.7 Substances marked as or known to be poison (Groups I, II and III) must not be carried in the same railway wagon, lorry, hold of a ship, compartment of an aircraft or other conveyance with substances marked as or known to be foodstuffs, feeds or other edible substances intended for consumption by humans or animals. Relaxations of this position can be allowed for substances of groups II and III provided the competent authority is satisfied that the packing and segregation are adequate to prevent the contamination of foodstuffs, feeds or other edible substances intended for consumption by humans or animals.

Decontamination of conveyances

6.8 A railway wagon, lorry, cargo space of a ship, compartment of an aircraft, or other conveyance which has been used to carry substances marked as or known to be poison (Groups I, II and III) must before re-use be inspected for contamination. A railway wagon, lorry, hold of a ship, compartment of an aircraft, or other conveyance which has been contaminated must not be returned to service until such contamination has been removed.

Table 6.1

Grouping of pesticides according to percentages of active substance

The purpose of this list is to show the range of pesticide formulations falling within the respective groups according to the quantity of active substance.

Name	I	II	III solid	III liquid
Acephate				100-40
Aldrin		100- > 75	75-7	75-2
Aldicarb	100- > 15	15- > 1	1- > 0	1- > 0
Allethrin				100-30
Allidochlor			10-35	100-35
Aminocarb		100- > 60	60-6	60-1
Amidothion				100-30
Arsenic Compounds		100- > 20	20-2	20-0.5
Azinphos Ethyl		100- > 25	25-2	25-0.5
Azinphosmethyl		100- > 20	20-2	20-0.5
Barban				100-30
Bendiocarb		100- > 65	65-5	65-1
Bentazone				100-50
Benzylprop-Ethyl				100-75
Benzulide				100-35
Benquincy			100-20	100-5
Binapacryl			100-25	100-5
Bromophos-Ethyl			100-15	100-3
"Bomyl"		100- > 60	60-6	60-1
Bromoxynil			100-35	100-10
Butocarboxim			100-30	100-5
Carbaryl			100-15	100-4
Carbofuran		100- > 10	10-1	10- > 0
Carbophenothion		100- > 20	20-1	20-0.5
Chlordane			100-55	100-10
Chlordecone			100-15	100-4
Chlordimeform			100-50	100-10
Chlordimeform Hydrochloride			100-70	100-15
Chlorfenvinphos		100- > 20	20-2	20-0.5
Chlormequat				100-30
Chlormephos		100- > 15	15-4	15- > 0
Chlorobenzilate				100-[illegible]
Chloropicrin			100-50	10[illegible]
Chloroplacinone	100- > 40	40- > 4	4- > 0	4- > 0
Chlorthiophos	100- > 40	40- > 5	5- > 0	5- > 0
Copper Sulfate			100-60	100-10
Crotoxyphos			100-25	100-5
Coumachlor			100-10	100-2

Name	I	II	III	
			solid	liquid
Copper compounds to be classified according to LD_{50} values				
Coumafuryl			100-30	100-20
Coumaphos		100- >30	30-3	30-0.5
Crimidin	100- >25	25- > 2	2- > 0	2- > 0
Crotoxyphos			100-15	100-4
Crufomat			100-40	100-20
Cycloheximidine			100-10	100-3
Cyanazine			100-35	100-10
2.4-D			100-75	100-15
Dazomet			100-60	100-15
4-DB			100-40	100-10
DDT			100-20	100-5
Demephion	100- > 0	-	-	-
Demeton-O-Methyl				
1) Thiono Isomer			100-35	100-5
2) Thiol Isomer			100-10	100-
Demeton-S-Methyl		100- >80	80-8	80-2
Demeton-S-Methyl sulfoxide	100- >50	50- > 5	5- > 0	5- > 0
Demeton	100- >30	30- > 3	3- > 0	3- > 0
2.4-DEP			-	100-35
Desmetryne			-	100-65
Diallate			100-80	100-20
Dialiphos			100-10	100-2
Diazinon			100-15	100-4
1.2-Dibrom-3-Chlorpropane			100-30	100-5
Dicamba			-	100-50
Dichlorprop			-	100-40
Dichlorfluanide			-	100-25
Dichlorfenthion			100-50	100-10
Dichlone			-	100-80
Dichlorvos		100- >35	35-5	35-5
Dicufol			-	100-25
Dicoumarin			100-10	100-2
Dicrotophos		100- > 25	25-3	25-0.5
Dieldrin		100- > 40	40-10	40-2
Difenzoquat			100-40	100-20

Name	I	II	III solid	III liquid
Dimefox	100–> 20	20–> 2	2–> 0	2–> 0
Dimethoate			100–30	100–10
Dimetilan		100–> 20	20–2	20–3
Dimexan			100–45	100–10
Dinoseb		100–> 40	40–5	40–5
Diposeb-Acetate			100–10	100–3
Dinoterb		100–> 50	50–5	50–1
Dinoterb-Acetate			100–10	100–5
Dioxacarb			100–10	100–5
Dioxathion		100–> 40	40–4	40–1
Dinobuton			100–10	100–2
Diquat			100–45	100–10
Diphacinone	100–> 15	15–> 0	-	-
Diphenamid			100–50	100–10
Disulfoton		100–> 15	15–2	15–> 0
Dithianon			-	100–50
DNOC		100–> 50	50–5	50–1
Dodine (=Acetate)				100–25
Drazoxolon			100–25	100–5
Chlorpyrifos (= Dursban)			100–15	100–4
(Dymfate = Ronophos see there)				
Endosulfan		100–> 80	80–8	80–2
Endothal		100–> 75	75–5	75–2
Endothion		100–> 45	45–5	45–1
Endrin		100–> 60	5–> 0	5–> 0
EPTC			-	100–80
EPN	100–> 75	75–> 15	15–3	15–3
Ethion		100–> 25	25–2	25–0.5
Ethoate-Methyl			100–25	100–5
Ethoprophos	100–> 65	65–> 10	10–3	10–3
5-Ethoxy-3-trichloromethyl-1,2,4-thiadiazol			-	100–50

Name	I	II	III solid	III liquid
Etridiazole			-	100–50
Fenuchloralin			100–> 0	100–> 0
Fenitrothion			100–50	100–10
Fenoprop			-	100–50
Fensulfothion	100–> 40	40–> 4	4–> 0	4–> 0
Fentin-Acetate			100–25	100–5
Fentin-Hydroxyde			100–120	100–5
Fenthion			100–50	100–15
Fluoracetamid		100–> 50	50–5	50–0,5
Fluoride Compounds			100–10	100–5
Formetanate		100–> 40	40–4	40–1
Formothion			100–65	100–15
Fonofos (Dyfonate)	100–> 60	60–> 6	6–> 0	6–> 0
Heptenophos		100–> 80	80–10	80–2
Isazofil			100–60	100–15
Isoxynil			100–30	100–20
Isopenfos	100–> 5	5–> 1	1–> 0	10–> 0
Isolan		100–> 10	10–1	1–> 0
Isolane		100–> 20	20–2	20–0,5
Isoprothiolane			-	100–0
Linuron			100–20	100–5
Malathion			-	100–50
MCPA			-	100–35
MCPB			-	100–40
Mecarbam		100–> 50	50–5	50–0,5
Mecoprop				100–50
Medinoterbe		100–> 80	80–0	80–0
Mephosfolan halogen.	100–> 70	70–> 5	5–> 0	5–> 0
Mercuric compounds Mercurous compounds	100–> 70	70–> 0		
Metaldehyde			100–50	100–10

Name	I	II	III	
			solid	liquid
Methidathion		100–> 40	4 -4	4–1
Methiocarb			100–10	10–3
Methomyl		100–> 30	30–3	30–0.5
Methyl Isothiocyanate			100–35	100–8
Methyltrithion			100–15	100–4
Mevinphos	100–> 60	60–> 5	5–> 0	5–> 0
Halogenated mercurous compounds			100–> 40	100–> 10
"Mirex"			100–60	100–15
Moham			100–10	100–3
Molinate			-	100–25
Monocrotophos		100–> 25	25–5	25–0.5
Morphamquat			100–65	100–15
Morphothion is not more produced				
Metaldenyde				100–30
Nabame			100–80	100–20
Naled			100–50	100–10
(Nemagon see 1,2 Dibrom-3-Chlorpropane)				
Nicotine			100–10	100–2
Nitrofen			-	100–30
Omethoate			100–10	100–3
Oxamyl		100–> 10	10–1	10–> 0
Oxydemeton-Methyl		100–> 90	90–9	90–2
Oxydisulfoton	100–> 70	70–> 5	5–> 0	5–> 0
Paraoxon	100–> 35	35–> 5	5–> 0	5–> 0
Paraquat		100–> 40	40–4	40–4
Parathion	100–> 4	4–> 0	-	-
Parathion-Methyl		100–1	15–1	15–> 0
Penoxalin			-	100–50
Pentachlor phenol		100–> 50	50–5	50–1

Name	I	II	III	
			solid	liquid
Phenkapton			100–10	100–2
Phorate	100–>20	20–>2	2–>0	2–>0
Phosalone			100–20	100–5
Phosmet			100–15	100–4
Phosfolan		100–>15	15–3	15–0.5
Phosphamidon		100–>30	30–3	30–0.5
Pindone and Salts			100–55	100–10
Pirimicarb			100–75	100–20
Pirimiphos Ethyl			100–30	100–5
Promecarb		10–>2	20–2	20–2
Propachlor			–	100–35
Propoxur			100–15	100–4
Propanil			–	100–25
Protoluazon-Hydrochloride			–	100–35
Prothoate		100–>25	25–4	25–>0
Pyrazoxon	100–>80	80–>5	5–>0	5–>0
Pyrethrin			–	100–5
Pyrimiphos			100–55	100–15
Quinomethionate			–	100–55
Rotenone			100–25	100–5
Rynia			–	100–50
Sabadilla				
Sabulan (not zero manufactured)				
Sodium arsenite		100–>20	20–2	20–0.5
Strychnine	100–>20	20–>0	–	–
Sulfallate			–	100–10
Sulfur		100–>10	10–>0	10–>0
2,4,5-T		–	100–40	100–10
Temephos			–	100–30

Name	I	II	III	
			solid	liquid
TEPP	100-> 10	10-> 0	-	-
Terbumeton			-	100-20
Terbufos	100-> 15	15-> 3	3-> 0	3-> 0
Thallium Compounds to be classified according to LD50 available				
Thallium Sulfate		100-> 30	30-3	30-0.5
Thiometon		100-> 50	50-5	50-1
Thionazin (Zinophos)	100-> 70	70-> 5	5-> 0	5-> 0
Thiram			-	100-25
Thioquinox			-	100-50
Tetradifon			-	100-25
Triallate			-	100-50
Toxaphene (Camphechlor)			100-10	100-3
Triamiphos		100-> 20	20-2	20-0.5
Tributyltin-Compds.			100-25	100-6
Tricamba			100-60	100-15
Trichloronate		100-> 30	30-3	30-0.5
Trichlorphon		-	100-80	100-20
Cyhexatin		-	100-55	100-10
Tridemorph			-	100-30
Triphenyltin-Compounds			100-40	100-10
Vamidothion			100-10	100-3
Warfarin and Salts	100-> 20	20-> 2	2-> 0	2-> 0
Zectran		100-> 25	25-2	25-0.5

PART B - DIVISION 6.2

DEFINITION OF 'INFECTIOUS SUBSTANCES'

6.9 (a) "Infectious substances" are defined as those substances which are infectious or are reasonably suspected to be infectious for man or animals.

(b) Animal and human vaccines, including seed strains approved for the preparation of live vaccines are regarded as infectious substances only if no licence for their manufacture has been issued by the control authority of the country in which they were produced.

6.10 In certain cases, some licensed vaccines may present a biohazard only in certain parts of the world. In that case national authorities may require these vaccines to conform with the requirements for infectious substances or may impose other restrictions.

RESPONSIBILITY OF CONSIGNOR OF INFECTIOUS SUBSTANCES

CO-ORDINATION

6.11 The shipment of infectious substances requires co-ordinated action by the consignor, the carrier and the consignee to ensure safe transport and arrival on time and in proper condition. To this end, the measures recommended below should be taken:

(a) Advance arrangements between consignor, carrier and consignee

Despatch of infectious substances should not take place before advance arrangements have been made between consignor, carrier and consignee and before the consignee has confirmed with his national authorities that the substances can legally be imported and that no delay will be incurred in the delivery of the consignment to its destination.

(b) Preparation of dispatch documents

In order to secure transmission without hindrance it is necessary to prepare all transport documents, including the consignor's certificate, as shown in figure 15.1, in strict accordance with rules governing the acceptance of the materials to be dispatched. If the substance is perishable, warnings should appear on an accompanying transport document for instance: "Keep cool +2/+4°C" or "Keep frozen" or "Do not freeze". The full address of the consignee should be shown on the appropriate transport document, together with the name of a responsible person and his telephone number.

(c) Routing

Whatever the mode of transport used, shipment should be by the most direct route. If transhipment is necessary, precautions should be taken to ensure special care, expeditious handling and monitoring of the substances in transit.

The transport documents should show the number of the flight or train, its date and the name(s) of the airport(s) or station(s) of transhipment.

(d) Timely notification of all transportation data by shipper to consignee

The consignor should notify the consignee in advance of shipping details, such as means of transport, flight or train number(s), consignment document number and date and hour of expected arrival at the point of destination so that the consignment can be collected promptly. The most rapid means of communication should be used for this notification.

PACKING

6.12 Consignors of infectious substances should ensure that packages are prepared in such a manner that they arrive at their destination in good condition and present no hazard to persons or animals during conveyance. The packaging should include the following essential elements:

(a) An inner packaging comprising:

(i) a watertight primary receptacle;

(ii) a watertight secondary packaging;

(iii) absorbent material placed between the primary receptacle and the secondary packaging. If several primary receptacles are placed in a single secondary packaging, they should be wrapped individually so as to prevent contact between them. The absorbent material, such as cotton wool, should be in sufficient quantity to absorb the entire contents of the primary receptacles. A non-hygroscopic substance which does not evaporate under shipping conditions should be added to inactivate the infectious substances in case of accidental spillage.

Inner packages containing infectious substances should not be consolidated with other inner packages.

(b) An outer packaging of sufficient strength to pass the performance tests provided for in paragraph 6.12. The smallest over-all external dimension of packagings used for freight shipments shall be at least 10 cm.

Apart from exceptional consignments, such as whole organs, requiring special packaging, infectious substances should be packed according to the following guidelines:

Lyophilized substances

Primary receptacles include flame-sealed glass ampoules or rubber-stoppered glass vials fitted with metal seals.

Liquid or solid substances

(a) Substances shipped at ambient temperature or a higher temperature

Primary receptacles may be of glass, metal or plastics. Positive means of ensuring a leak-proof seal should be provided such as a heat seal, a skirted stopper or a metal crimp seal. If screw caps are used these should be reinforced with adhesive tape.

(b) Substances shipped refrigerated or frozen (wet ice, refrozen packs, dry ice)

Primary receptacles closed by screw caps should not be used. Ice or dry ice should be placed outside the secondary packaging(s). Interior supports should be provided to secure the secondary packaging(s) in the original position after the melting of ice has been completed. If ice is used, the packaging should be leak-proof. If dry ice is used, the outer packaging should permit the release of carbon dioxide gas.

(c) Substances shipped at ambient temperature

The primary receptacles should be heat sealed and, instead of being made of glass, should be of plastics capable of withstanding very low temperatures. The secondary packaging should also be capable of withstanding very low temperatures and in most cases will need to be fitted over individual primary receptacles. Requirements for shipment of liquid nitrogen should also be observed.

Whatever the intended temperature of shipment, the primary and secondary packaging used for infectious substances should be capable of withstanding a pressure differential of 95 kPa (0.95 bar) between sea level and an altitude of 12 192 m (40 000 ft).

Infected animals

Live vertebrate or invertebrate animals should not be used for the transport of an infectious agent unless the agent cannot be shipped by any other means. Infected animals should be contained in worm-tight packaging such as that used for the transport of germ-free animals. The consignment should be declared and labelled as "live animals" and as "infectious substance".

Any animal suspected to have been exposed to the consignor it should be properly disinfected or quarantined before shipment. All labels ("live animal" and "infectious substance" labels) should be affixed.

Test requirements for packagings

6.1.5 In addition to the general provisions of paragraphs 6.1.1 to 6.1.4 (except 6.1.4.1) at least one sample of each type of packaging (including inner packaging filled with water, except in the case of packagings for live animals where a weight equivalent to that of the animals should be used) should be subjected to the cumulative effects of the free drop test, and of either puncture test a or puncture test b, as applicable. The packages should be sprayed to a water spray heavy enough to keep its entire exposed surface (except the bottom) continuously wet during a period of 30 minutes prior to being subjected to the tests.

(a) Free drop test

(i) Packages exempted from this test
None

(ii) Size of sample
Five packages (one for each drop)

(iii) Target
The target should be a rigid, smooth, flat and horizontal surface.

or other documents required by his national authorities. Upon receipt of known or suspected high-risk infectious substances of human or animal origin, the consignee should immediately acknowledge receipt to the consignor by the most rapid means of communication available to him.

The consignee should have a suitably equipped and adequately staffed receiving area. All incoming consignments of infectious substances should be unpacked in areas designated for this purpose and under conditions of containment commensurate with the degree of danger presented by the infectious substances. A record shall be kept of the receipt of all substances.

ACTION TO BE TAKEN IN THE EVENT OF DAMAGE OR LEAKAGE

6.17 If any person responsible for the carriage or opening of packages containing infectious substances becomes aware of damage to or leakage from such a package, he should:

(a) avoid handling the package or keep handling to a minimum;

(b) inspect adjacent packages for contamination and put aside any that may have been contaminated;

(c) inform the appropriate public health authority or veterinary authority, and provide information on any other countries of transit where persons may have been exposed to danger;

(d) notify the consignor and/or the consignee.

INTERNATIONAL NOTIFICATION

6.18 A public health or veterinary authority to which actual or suspected leakage from or damage to a package is reported should notify the authorities of any countries in which the package may have been handled, including countries of transit."

Annex I

SPECIAL RECOMMENDATIONS RELATING TO CLASS 7
(ST/SG/AC.10/1/ ... - Chapter 7)

Amendments adopted by the Committee

Paragraph 7.4

Amend the existing text (Orange Book), as follows:

7.4. A full list of radioactive nuclides is included in the IAEA "Regulations for the safe transport of Radioactive Materials."

Annex 3

GENERAL RECOMMENDATIONS ON PACKING
(ST/SG/AC.10/1/Rev.1 - Chapter 9)

Amendments adopted by the Committee

Paragraph 9.34

Replace "; and", at the end of the paragraph, by a full stop. Add a new paragraph after (f):

"Every re-usable packaging liable to undergo a reconditioning process which might obliterate the packaging markings shall bear the marks indicated in paragraph 9.34 (a), (b), (c) and (d) in a permanent form (e.g. embossed) able to withstand the reconditioning process.".

Paragraph 9.34.1.

Add to the end of paragraph:

"For metal receptacles requiring embossment, the letters UN may be applied in place of the symbol".

Paragraph 9.34.2.

Replace existing text by:

"9.34.2 After reconditioning a packaging the reconditioner shall apply to it, near the permanent marks required by paragraph 9.34, a mark specifying:

(g) the name of the State in whose territory reconditioning was carried out (the distinguishing sign of vehicles in international traffic and the initials of the competent authority shall be accepted);
(h) the name or symbol of the reconditioner;
(i) the year of reconditioning; and
(j) in the case of a packaging subject to a leakage test, the symbol "L".

Paragraph 9.34.3.

Read:

"Examples of markings:

for a NEW packaging:

1A1/Y1.4/76 (as in 9.34 (a), (b), (c) and (d)),
NL/VL123 (as in 9.34 (e) and (f));

for a RECONDITIONED packaging:

1A1/Y1.4/76 (as in 9.34 (a), (b), (c) and (d)),
NL/RB/77/R (as in 9.34.2 (g), (h), (i) and (j))."

Paragraphs 2.62, 2.69, 2.70, 2.80, 2.85, 2.87, 2.92, 2.95, 2.98, 2.101, 2.109, 2.125, and 2.137 should read:

"Method of loading

"... packages should be capable of withstanding for a period of 24 hours a superimposed weight placed on a flat surface resting on the top of the package, equivalent to the total weight of identical packages which could be stacked on it during transport. The minimum stacking height should be 3 m."

Paragraph 2.72

Replace the second sentence by the following:

"The water-resistance of the outer surface shall be such that the increase in weight, as determined in a test carried out over a period of 30 minutes by the Cobb method of determining water absorption, is not greater than 155 g/cm^2 - see ISO International Standard 535 - 1976 (E)."

Paragraph 2.101

Delete the paragraph: "However, for sea transport, ... is 6 m.".

Paragraph 2.102

Under sub-section "Method of testing", delete last sentence, starting with "However ... ...".

Paragraph 2.113

Read:

"5HH2 - The bag should be rendered waterproof so as to prevent all entry of moisture, by means of:

Separate inner liners of waterproof paper (e.g. waxed kraft, kraft union or polyethylene-coated kraft); polyethylene film bonded to the inner or outer surface or separate inner liner(s) of plastics. Maximum net weight: 50 kg."

Annex 10

SPECIAL RECOMMENDATIONS ON PACKING FOR DIVISION 5.2
(ST/SG/AC.10/1/Rev.1 - Chapter 11)

Amendments elected by the Committee

Amend title of second section as follows:

"Temperature control requirements"

Paragraph 11.10

Replace existing paragraph by:

"11.10 The control temperature is the maximum temperature at which an organic peroxide can be safely transported during a prolonged period of time. The control temperature is derived from the self-accelerating decomposition temperature (SADT) as follows:

Table 11.1

	SADT	Control temperature
A	20°C or less	Deduct 20°C from SADT
B	over 20°C to 35°C	Deduct 15°C from SADT
C	over 35°C	Deduct 10°C from SADT

The SADT for organic peroxides is to be determined by conducting the tests with with 5°C intervals."

Paragraph 11.11

Read first sentence:

"11.11 The SADT is defined for the purpose of organic peroxides as the lowest temperature at which self-accelerating decomposition may occur in the package used in transport."

Paragraph 11.13

Read first line:

"11.13 The temperature of those organic peroxides for which no control temperature ...".

Paragraph 11.14

Read first line:

"11.14 The organic peroxides for which a control temperature is indicated should be ...".

Paragraph 11.16

Read:

"11.16 Liquid air or liquid oxygen must not be used as a refrigerant. The refrigeration temperature must be selected so as to avoid any [illegible] separation of phases."

Add the three new following paragraphs after paragraph 11.16:

"11.17 If during transport the control temperature is exceeded an alert procedure has to be started involving repair of the refrigeration machinery or an increase in the cooling capacity (e.g. by adding liquid or solid refrigerants), preparation of a thermal protection for the product and a temperature check at close intervals.

11.18 If the emergency temperature is reached, emergency procedures (e.g. disposal of the organic peroxide) have to be started.

11.19 The emergency temperature can be derived from the control temperature as follows:

Table 11.1

Control temperature	Emergency temperature
0°C or less	not [illegible] to the control temperature
over 0°C	not [illegible] to the control temperature

Renumber the existing paragraphs 11.17 to 11.33 to read 11.20 to 11.36.

Paragraph 11.36

Add under heading "List of packagings":

"(see also paragraph 11.36)"

Reverse the order of listing of packaging numbers P10 and P12 (P10 becoming P12, and P12 becoming P10).

Add new packaging number under P11:

"P11 Plastics bottles, jars, cans or boxes packed in a fibreboard box, fibreboard drum, plywood drum or wooden box..... 500 g 1 kg"

Delete packaging numbers P26 and P5.

Read figure in fourth column in regard of packaging number P26b: "220 l".

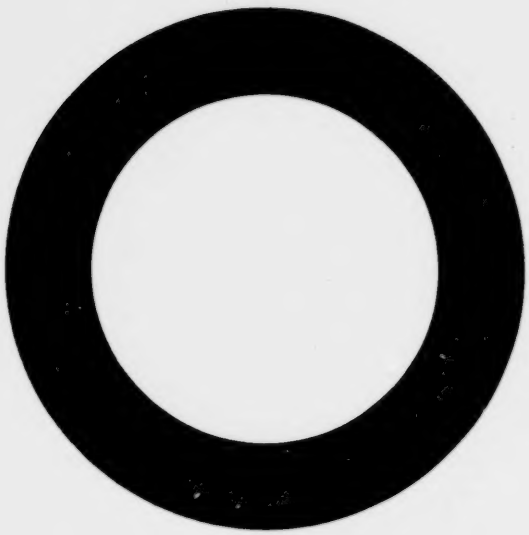
Amend description of packaging number P27 to read:

Amend P27 as follows:

"P27 Tank-wagons, tank-lorries. The tanks should be made of aluminium of at least 99.5 per cent purity or of steel, the compatibility of the latter to be certified by the competent authority. To prevent the tank bursting in any event, including fire engulfment, it should be provided with pressure relief devices which are adequate in relation to the capacity of the tank and to the nature of the product carried. The devices must also be compatible with the product."

Add new paragraph P29:

"P29 Plastics container in a steel frame. Design and construction to be certified by the competent authority. ..... - 1000 l"



UNITED NATIONS

SECRETARIAT

ST

GENERAL

ST/SG/AC.10/1/Add.1/Corr.1*/
17 October 1977
Original: ENGLISH

COMMITTEE OF EXPERTS ON THE
TRANSPORT OF DANGEROUS GOODS

REPORT OF THE COMMITTEE OF EXPERTS ON ITS THIRD SESSION
(6-13 December 1976)

Addendum 1 - Corrigendum 1

The following annexes should be corrected:

Annex 1 - Scope of the Recommendations

Annex 3 - Special Provisions relating to Individual Substances and Articles

Annex 4 - Special Recommendations relating to Class 1

Annex 5 - Special Recommendations relating to Class 3

Annex 6 - Special Recommendations relating to Class 6

Annex 7 - Special Recommendations relating to Class 7

Annex 8 - General Recommendations on Packing

ANNEX 1

Paragraph 1.27

Delete

ANNEX 3

Special provision 118

Last line should read:

"in transport (paragraphs 4.65 and 4.66 "Initiation, means of ... (2) ... refer)."

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*/ Reissued for technical reasons.

Special provision 120

Delete comma after "dibydrate"

Under heading "(3) Solution", Special provision "120" should be inserted in the list.

ANNEX 4

Figure 4.2

(b), second line,

Insert "substances" after "explosive"

Add

(c) Compatibility Group J, in the last column, read

"1.1 J
1.2 J"

ANNEX 5

Table 1 - Replace existing table by:

Packing group	Flash Point (Closed-cup)	Initial Boiling Point
I	-	$\leq$ 35°C
II	$<$ 23°C	$>$ 35°C
III	$\geq$ 23°C; $\leq$ 60.5°C	$>$ 35°C

ANNEX 6

Title of Part A - Division 6.1 should read

"PART A - DIVISION 6.1
POISONOUS (TOXIC) SUBSTANCES"

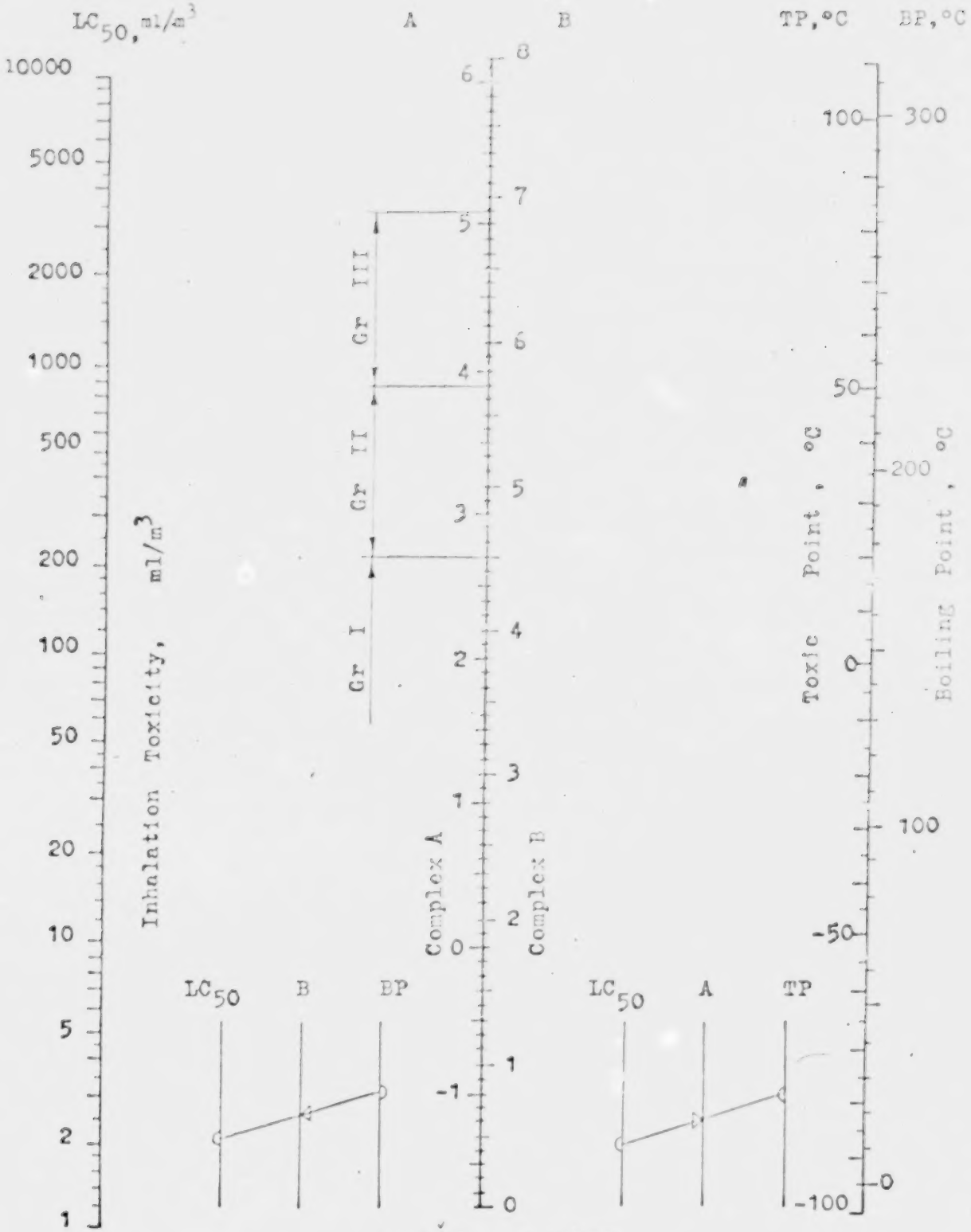
Paragraph 6.4

Table (a):

Group III should read:

III	Solids: $\geq$ 50-500 Liquids: $\geq$ 50-2 000	$>$ 200-1 000	$>$ 2-10

Nomograph for calculating A- and B-complexes and for defining appropriate TP by BP



$A = 1/3 LC_{50} + 0,026\ TP$

$B = 1/3 LC_{50} + 0,066\ BP$

$TP \simeq 0,625\ BP - 102\ (\pm 45)$

Table 1

Name	I	II	III	
			2 (1)	1 (2)
Acephat				20 -> 10
Aldicarb	100 -> 15	15 -> 1	1 -> 0	1 -> 0
Aldrin		1 -> 0	0 ->	0 ->
Amitraz				20 -> 10
Azinphos-ethyl			2 -> 0	1 -> 0
Azinphos-methyl				100 ->
Bendiocarb		1 -> 0	0 ->	0 ->
Benfuracarb		1 -> 0	0 ->	0 -> .
Bensultap		1 -> 0	0 ->	0 -> .
Beta-cyfluthrin		1 -> 0	0 ->	0 -> .
Bifenthrin				20 -> 10
Bioallethrin		100 -> 50	50 ->	50 ->
Bioresmethrin			100 -> 20	100 ->
Bromophos				100 ->
Bromophos-ethyl				100 ->
Bromopropylate			100 -> 20	100 ->
Buprofezin*		100 -> 50	50 ->	50 ->
Butocarboxim			100 -> 10	100 ->
Butoxycarboxim			100 -> 50	100 ->
Cadusafos			10 -> 2	10 ->
Carbaryl			100 -> 10	100 ->
Carbofuran			100 -> 5	100 ->
Carbophenothion		100 -> 10	10 -> 1	10 -> 0
Cartap		100 -> 20	20 -> 2	2 -> 0
Chlorbufam			100 -> 50	100 ->
Chlorethoxyfos			100 -> 10	100 ->
Chlorfenvinphos			100 -> 10	100 ->
Chlormephos			100 -> 10	100 ->
Chloroxuron			100 -> 10	100 ->
Chlorpropylate			100 -> 10	100 ->
Chlorpyrifos		100 -> 20	20 -> 2	20 -> 0
Chlorsulfuron		100 -> 10	10 -> 1	10 -> 0
Chlorthiophos	100 -> 40	40 -> 4	4 -> 0	4 -> 0
Copper compounds to be classified according to LD_{50} value				
Copper sulphate			100 -> 50	100 -> 10
Coumachlor			100 -> 10	100 -> 2
Coumafuryl			100 -> 10	100 -> 20
Coumaphos		100 -> 50	50 -> 5	50 -> 0
Crimidine	100 -> 25	25 -> 2	2 -> 0	2 -> 0

Pesticide				
Crotoxyphos			100-10	100-5
Crufomate			100-20	100-20
Cyanazine			100-50	100-50
Cycloheximide			100-10	100-5
Cyromazine		-	100-5	100-20
2,4-D			100-50	100-20
Dazomet			100-5	100-5
2,4-DB			100-5	100-5
DDT			100-20	100-1
Decamethrin	100-> 0	-	-	-
Deltamethrin	100-> 30	30-> 5	5-> 1	1-> 0.5
Demeton-O-methyl				
(1) Thiono isomer			100-50	100-5
(2) Thiol isomer			100-10	100-5
Demeton-S-methyl		100-> 50	50-1	1-0.5
Demeton-S-methyl sulfoxide	100-> 50	50-> 5	5-> 1	1-> 0.5
2,4-DEP			-	100-5
Desmetryne			-	100-50
Diallate			100-10	100-5
Diallate			100-20	100-20
Diazinon			100-1	100-1
1,2-Dibromo-3-chloropropane			100-50	100-5
Dicamba			-	100-50
Dichlone			-	100-20
Dichlofluanid			-	100-25
Dichlorophenidicn			100-10	100-1
Dichlorprop			-	100-5
Dichlorvos		100-> 5	5-1	1-0.5
Dicofol			-	100-25
Dicrotophos		100-> 50	50-5	5-> 0.5
Dicuanol			100-1	1-0.2
Dieldrin		100-> 50	50-10	10-2
Difenzoquat			100-50	100-5
Diflubenzuron	100-> 25	25-> 5	5-> 1	1-> 0.5
Dimethoate			100-20	100-10
Dimethrin		100-> 20	20-2	2-0.5
Dinoseb			100-5	100-20
Dinoterb			100-10	100-5
Dinoseb		100-> 50	50-5	5-0.5
Dinocap-acetate			100-1	100-5
Dinoterb		100-> 50	50-5	5-1
Dinoterb-acetate			100-10	100-5
Dinocap			100-10	100-5
Dioxathion		100-> 50	50-5	5-1
Diphacinone	100-> 25	25-> 5	5-> 1	1-> 0.5
Diphenamid			100-5	100-10
Diquat			100-25	100-10

Name	I	II	III	
			s1	liquid
Dieldrin		100-> 15	1->2	1->
Dilidrin			-	100-50
DNC		100-> 50	-1	-1
Ending (-acetate)				-05
Drazoxolon			100->	100->
Dromolfen		100-> 50	50->	50->
Endosul		100-> 75	75->	75->
Endosulfan		100->	->	->
Endrin	100-> 25	100->	->	->
EPN	100-> 75	100-> 25	10->	10->
EPTC			-	100->
Ethion		100-> 50	2->	2->
Ethoxy-ethyl			100->	100->
Ethyl-para	100-> 75	100-> 10	1->	1->
Fenitrazole			-	100-50
Fenoxaprop			100->	100->
Fenthion			100->	100-10
Ferbam			-	100-50
Fonofos	100->	100->	->	->
Formothion			100->	100->
Fosthiazate			100->	100->
Furfuryl-acetate			100->	100-5
Furyl-hydroxy			100->	100-5
Fluometuron		100-> 50	2->	50-2
Glyphosate-isopropyl			2->	100-1
Guazatine	100-> 50	100->	->	->
Formetanat		100->	-	-1
Farmothion			100->	100-10
Heptachlor		100->	50->	50->
Imazalil			100-50	100-15
Isoxyl			100-20	100-20
Isobenzan	100->	100->	1->	1->
Isofrin		100-> 10	10-2	10->
Isolan		100-> 50	20-2	20-0.5
Isoproturon			-	100-50
Linuron			100-20	100-5
Malathion			-	100-50
MCPA			-	100-35
MCPB			-	100-40
Mecoprop		100-> 50	50-3	50-0.5
Mecoprop				100-50
Melinotere		100-> 50	50-2	50-2
Mephosfolan	100-> 25	25->	5->	5->
Mercaric halocounted compounds		20->		
Mercurous compounds	100-> 20			
Mercurous compounds, halocounted			100-> 50	10-> 10

Name	I	II	III	
			solid	liquid
Metham sodium			100-50	100-10
Methidathion		100->40	40-4	10-1
Methiocarb			100-10	100-3
Methomyl		100->30	30-3	30-0.5
Methyl isothiocyanate			100-35	100-3
Methyltrithion			100-15	100-4
Mevinphos	100->60	60->5	5->0	5->0
"Mirex"			100-50	100-15
Mobam			100-10	100-3
Molinate			-	100-25
Monocrotophos		100->25	25-3	25-0.5
Morphamquat			100-35	100-15
Naban			100-60	100-20
Naled			100-50	100-10
Nicotine			100-10	100-2
Nitrofen			-	100-30
Omethoate			100-10	100-3
Oxamyl		100->10	10-1	10->0
Oxydemeton-methyl		100->90	90-9	90-2
Oxydisulfoton	100->70	70->5	5->0	5->0
Paraquat		100->40	40-4	40-2
Parathion	100->4	4->2	-	-
Parathion-methyl		100-15	15-1	15->0
Pendimethalin			-	100-30
Pentachlorophenol		100->60	90-5	5-1
Phenkapton			100-10	100-2
Phorate	100->20	20->2	2->0	2->0
Phosalone			100-20	100-5
Phosfolan		100->15	15-2	15-0.5
Phosmet			100-15	100-4
Phosphamidon		100->30	30-3	30-0.5
Pindone and salts			100-55	100-10
Pirimicarb			100-75	100-20
Pirimiphos ethyl			100-30	100-5
Promecarb		100->70	70-7	70-2
Propachlor			-	100-35
Propanil			-	100-25
Propoxur			100-25	100-4
Prothiocarb-hydrochloride			-	100-65
Prothoate		100->15	15-1	15->0
Pyrazoxon	100->80	80->5	5->0	5->0
Pyrazophos			100-55	100-15
Pyrethrin			-	100-30
Quinomethionate			-	100-55
Rotenone			100-25	100-6
Ryania			-	100-30
Sodiumarsenite		100->20	20-2	20-0.5
Strychnine	100->20	20->0	-	-
Sulfallate			-	100-10
Sulfotep		100->10	10->0	10->0

Name	I	II	III	
			II	II-d
2,4,5-T			[illegible]	150-15
Toxaphene			-	100-9
DDT	100->10	10-> 1	-	-
Parathion	100->10	10-> 1	->	1-> 0
Ferbam			-	100-20
Dalapon			-	100-25
Dualite (proposed to be classified according to its herbicide				
Thallium sulfate		100-> 5	5->	5-0.5
Warfarin		100->50	-	50-1
Dieldrin	100-> 50	50-> 5	5-> 1	1-> 0
Thiuram			-	100-20
Ziram			-	100-25
Zineb			-	100-30
Triethion		100->20	20-5	20-0.5
Trihydroxy triazine			100-20	100-5
(Other than those specifically mentioned in Schedule and having LD50 as in)				
Trimedlure			100-50	100-15
Trioxymethylene		100-> 50	50-5	50-0.5
Triphenyltin compounds		-	100-20	100-20
Tris(2,3-dibromopropyl) phosphate			-	100-30
Triphenyltin hydroxide			-	100-10
Validamycin			100-10	100-5
Warfarin and salts	100-> 20	20-> 2	2-> 1	1-> 0
Zectran		100-> 25	25-5	25-0.5

Title 2 Part 3 - Division 6.2 should read

"PART 3 - DIVISION 6.2
DETECTION SUBSTANCES"

Paragraph 6.2

Title should read: "6.3 Definition"

Delete "6.2" before "(a)"

ANNEX 7

Title:

For Chapter 9 read Chapter 7

ANNEX 8

Paragraph 9.42

Table (page 165 of Orange book), first column, first line:

Add "1.1A" after the words "Only types"

Paragraph 9.97 should be inserted in the enumeration of paragraphs on page 29, first line.

Paragraph 9.101

Delete

UNITED NATIONS

SECRETARIAT

ST

GENERAL

ST/SG/AC.10/4/Add.2
17 January 1979

Original: ENGLISH

COMMITTEE OF EXPERTS ON THE TRANSPORT OF DANGEROUS GOODS

REPORT OF THE COMMITTEE OF EXPERTS ON ITS TENTH SESSION
(4-13 December 1978)

Addendum 2

Annex 2 - List of dangerous goods most commonly carried - is reproduced below.

Annex 2

LIST OF DANGEROUS GOODS MOST COMMONLY CARRIED
(ST/SG/AC.10/1/Rev.1 - Chapter 2)

Amendments adopted by the Committee

The Committee decided to capitalize the designation of the substances and articles.

It also decided to add two columns to the table: one for the control temperatures, the second one for the emergency temperatures.

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(1) New entries

SUBSTANCE or ARTICLE		HAZARDS			PACKING		CONTROL TEMPERATURE (°C)	EMERGENCY TEMPERATURE (°C)
NUMBER	DESIGNATION	CLASS DIVISION	SUBSIDIARY RISKS	SPECIAL PROVISIONS	GROUP	METHOD		
0395	ROCKET MOTORS, LIQUID FUELLED	1.2 J	+			E 103		
0396	ROCKET MOTORS, LIQUID FUELLED	1.3 J	+			E 103		
0397	ROCKETS, LIQUID FUELLED, with bursting charge	1.1 J	+			E 103		
0398	ROCKETS, LIQUID FUELLED, with bursting charge	1.2 J	+			E 103		
0399	BOMBS, CONTAINING INFLAMMABLE LIQUID, with bursting charge	1.1 J	+			E 103		
0400	BOMBS, CONTAINING INFLAMMABLE LIQUID, with bursting charge	1.2 J	+			E 103		
0401	DIPICRYL SULPHIDE, wetted with, by weight, not more than 10 per cent water	1.1 D	+	15		E 2		
0402	AMMONIUM PERCHLORATE having average particle size of less than 45 microns	1.1 D	+			E 2		
0403	FLARES, AERIAL	1.4 G	+			E 133		
0404	FLARES, AERIAL	1.4 S	+			E 133		
0405	CARTRIDGES, SIGNAL	1.4 S	+			E 115		
0406	DINITROSOBENZENE	1.3 C	+			E 25		
0407	TETRAZOL-1-ACETIC ACID	1.4 C	+			E 25		
0408	FUZES, DETONATING* with protective features	1.1 D	+	118		E 137		
0409	FUZES, DETONATING* with protective features	1.2 D	+	118		E 137		
0410	FUZES, DETONATING* with protective features	1.4 D	+	118		E 137		

SUBSTANCE or ARTICLE		HAZARDS			PACKING		CONTROL TEMPERATURE (°C)	EMERGENCY TEMPERATURE (°C)
NUMBER	DESIGNATION	CLASS DIVISION	SUBSIDIARY RISKS	SPECIAL PROVISIONS	GROUP	METHOD		
1910	CALCIUM OXIDE	8		106	III			
2786	ORGANOTIN PESTICIDES (compounds and preparations), liquid, toxic, n.o.s.	6.1		61 109				
2787	ORGANOTIN PESTICIDES (compounds and preparations), liquid, toxic, n.o.s., with a flash point below 32°C	6.1	3	61 109				
2788	ORGANOTIN COMPOUNDS, n.o.s.	6.1		44 109				
2789	ACETIC ACID, glacial or over 80 per cent solution by weight	8			II			
2790	ACETIC ACID exceeding 10 per cent but not exceeding 80 per cent solution by weight	8		106	II			
2791	AIRCRAFT THRUST DEVICE FOR ASSISTED TAKE-OFF	4.1		76	II			
2792	IGNITER FOR AIRCRAFT THRUST DEVICE FOR ASSISTED TAKE-OFF	4.1		76	II			
2793	FERROUS METAL BORINGS, SAVINGS, TURNINGS or CUTTINGS, in a form liable to self-heating	4.2		107	III			
2794	BATTERIES, electric, storage (Accumulators, electric), WET, FILLED WITH ACID	8			III			
2795	BATTERIES, electric, storage (Accumulators, electric), WET, FILLED WITH ALKALI	8			III			
2796	BATTERY FLUID, ACID (Electrolyte)	8			II			

SUBSTANCE or ARTICLE		HAZARDS			PACKING		CONTROL TEMPERATURE (°C)	EMERGENCY TEMPERATURE (°C)
NUMBER	DESIGNATION	CLASS DIVISION	SUBSIDIARY RISKS	SPECIAL PROVISIONS	GROUP	METHOD		
2797	BATTERY FLUID, ALKALI (Electrolyte)	8			II			
2798	PHENYL PHOSPHORUS DICHLORIDE	8			II			
2799	PHENYL PHOSPHORUS THIODICHLORIDE	8			II			
2800	BATTERIES, ELECTRIC, STORAGE (Accumulators, electric), wet, of the non-spillable type	8			III			
2801	DYES and DYE INTERMEDIATES, corrosive, n.o.s.	8		109 112	II or III			
2802	COPPER CHLORIDE	8		106	III			
2803	GALLIUM, METAL	8		106	I			
2805	LITHIUM HYDRIDE in fused solid form	4.3			II			
2806	LITHIUM NITRIDE	4.3			I			
2807	MAGNETIZED SUBSTANCES	9		106	III			
2809	MERCURY, METALLIC	8		123	III			
2810	POISONOUS (toxic) LIQUIDS, n.o.s.	6.1		44 109				
2811	POISONOUS (toxic) SOLIDS, n.o.s.	6.1		44 109				
2812	SODIUM ALUMINATE, SOLID	8		106	III			
2813	SUBSTANCES WHICH IN CONTACT WITH WATER EMIT INFLAMMABLE GASES, n.o.s.	4.3		76 109				

SUBSTANCE or ARTICLE		HAZARDS			PACKING		CONTROL TEMPERATURE (°C)	EMERGENCY TEMPERATURE (°C)
NUMBER	DESIGNATION	CLASS DIVISION	SUBSIDIARY RISKS	SPECIAL PROVISIONS	GROUP	METHOD		
2814	INFECTIOUS SUBSTANCES, HUMAN, n.o.s.	6.2		109 124				
2815	N-AMINOETHYLPIPERAZINE	8			III			
2817	AMMONIUM HYDROGEN FLUORIDE SOLUTION (Ammonium bifluoride solution)	8	6.1		II			
2818	AMMONIUM POLYSULPHIDE SOLUTION	8	6.1		II			
2819	AMYL ACID PHOSPHATE	8			III			
2820	BUTYRIC ACID	8			III			
2821	PHENOL SOLUTIONS	6.1			II			
2822	2-CHLOROPYRIDINE	6.1			II			
2823	CROTONIC ACID	8			III			
2825	DIISOPROPYLETHANOLAMINE	8			III			
2826	ETHYL CHLOROTHIOFORMATE	8			II			
2830	LITHIUM FERROSILICON	4.3			II			
2831	1,1,1-TRICHLOROETHANE (Methyl chloroform)	6.1			III			
2834	PHOSPHOROUS ACID, ORTHO-	8			III			
2835	SODIUM ALUMINIUM HYDRIDE	4.3			II			
2837	SODIUM HYDROGEN SULPHATE SOLUTION	8			II			
2838	VINYL BUTYRATE	3			II			

SUBSTANCE or ARTICLE		HAZARDS			PACKING		CONTROL TEMPERATURE (°C)	EMERGENCY TEMPERATURE (°C)
NUMBER	DESIGNATION	CLASS DIVISION	SUBSIDIARY RISKS	SPECIAL PROVISIONS	GROUP	METHOD		
2839	ALDOL	6.1			II			
2840	BUTYRALDOXIME	3			III			
2841	DI-n-AMYLAMINE	6.1			III			
2842	NITROETHANE	3			II			
2844	CALCIUM MANGANESE SILICON	4.3			III			
2845	PYROPHORIC LIQUIDS, n.o.s.	4.2		109 110				
2846	PYROPHORIC SOLIDS, n.o.s.	4.2		109 110				
2849	3-CHLOROPROPANOL-1	6.1			III			
2850	PROPYLENE TETRAMER	3			III			
2851	BORON TRIFLUORIDE DIHYDRATE	8			II			
2852	DIPICRYL SULPHIDE, WETTED with, by weight, at least 10 per cent water	4.1		114	I			
2853	MAGNESIUM FLUOROSILICATE (Magnesium silicofluoride)	6.1			III			
2854	AMMONIUM FLUOROSILICATE (Ammonium silicofluoride)	6.1			III			
2855	ZINC FLUOROSILICATE (Zinc silicofluoride)	6.1			III			
2856	FLUOROSILICATES (Silicofluorides), n.o.s.	6.1		109	III			

SUBSTANCE or ARTICLE		HAZARDS			PACKING		CONTROL TEMPERATURE (°C)	EMERGENCY TEMPERATURE (°C)
NUMBER	DESIGNATION	CLASS DIVISION	SUBSIDIARY RISKS	SPECIAL PROVISIONS	GROUP	METHOD		
2857	REFRIGERATING MACHINES, containing non-inflammable, non-toxic liquefied gases	2		119				
2858	ZIRCONIUM, METAL, DRY, coiled wire, finished metal sheets, strip (thinner than 254 microns but not thinner than 18 microns)	4.1			III			
2859	AMMONIUM METAVANADATE	6.1			II			
2860	VANADIUM TRIOXIDE, non-fused form	6.1			II			
2861	AMMONIUM POLYVANADATE	6.1			II			
2862	VANADIUM PENTOXIDE, non-fused form	6.1			II			
2863	SODIUM AMMONIUM VANADATE	6.1			II			
2864	POTASSIUM METAVANADATE	6.1			II			
2865	HYDROXYLAMINE SULPHATE	8			III			
2867	INK, printer's, with a flash point of 32°C or above	3			III	M		
2868	RESIN SOLUTION in inflammable liquid, with a flash point of 32°C or above	3			III	M		
2869	TITANIUM TRICHLORIDE MIXTURES, non-pyrophoric	8			II			
2870	ALUMINIUM BOROHYDRIDE and DEVICES CONTAINING ALUMINIUM BOROHYDRIDE	4.2	4.3	78	I			
2871	ANTIMONY POWDER	6.1			III			
2872	DIBROMOCHLOROPROPANE (1,2-Dibromo-3-chloropropane)	6.1			III			

SUBSTANCE or ARTICLE		HAZARDS			PACKING		CONTROL TEMPERATURE (°C)	EMERGENCY TEMPERATURE (°C)
NUMBER	DESIGNATION	CLASS DIVISION	SUBSIDIARY RISKS	SPECIAL PROVISIONS	GROUP	METHOD		
2873	DIBUTYLAMINOETHANOL (N,N-Di-n-butylaminoethanol)	6.1			III			
2874	FURFURYL ALCOHOL (Furyl carbinol)	6.1			III			
2875	HEXACHLOROPHENE (2,2'-Methylene bis-(3,4,6-trichlorophenol))	6.1			III			
2876	RESORCINOL (3-Hydroxyphenol, Resorcin)	6.1			III			
2877	THIOUREA (Thiocarbamide)	6.1			III			
2878	TITANIUM SPONGE GRANULES and SPONGE POWDERS, non-pyrophoric	4.1			III			
2879	SELENIUM OXYCHLORIDE	8	6.1		I			
2880	CALCIUM HYPOCHLORITE, HYDRATED, including mixtures, containing not less than 5.5 per cent and not more than 10 per cent water	5.1			II			
2881	NICKEL CATALYST, DRY	4.2		120	I			
2883	2,2-BIS-(tert-BUTYLPEROXY)PROPANE with at least 50 per cent phlegmatizer	5.2			II	P 1 a		
2884	2,2-BIS-(tert-BUTYLPEROXY)PROPANE with at least 13 per cent phlegmatizer and 47 per cent inert inorganic solid	5.2			II	P 1 a		
2885	1,1-BIS-(tert-BUTYLPEROXY)CYCLOHEXANE with at least 13 per cent phlegmatizer and 47 per cent inert inorganic solid	5.2			II	P 1 a		
2886	tert-BUTYL-PER-2-ETHYLHEXANOATE, maximum concentration 30 per cent and 2,2-BIS-(tert-BUTYLPEROXY)BUTANE, maximum concentration 35 per cent, with at least 35 per cent phlegmatizer	5.2			II	P 1 e	+35	+40

SUBSTANCE or ARTICLE		HAZARDS			PACKING		CONTROL TEMPERATURE (°C)	EMERGENCY TEMPERATURE (°C)
NUMBER	DESIGNATION	CLASS DIVISION	SUBSIDIARY RISKS	SPECIAL PROVISIONS	GROUP	METHOD		
2887	tert-BUTYL-PER-2,2-ETHYLHEXANOATE, maximum concentration 12 per cent and 2,2-BIS-(tert-BUTYLPEROXY)BUTANE, maximum concentration 14 per cent with at least 14 per cent phlegmatizer and 60 per cent inert inorganic solid	5.2			II	P 1 a		
2888	tert-BUTYL-PER-2-ETHYLHEXANOATE with at least 50 per cent phlegmatizer	5.2			II	P 1 a	+35	+40
2889	BIS-ISO-TRIDECYL-PEROXYDICARBONATE, technical pure	5.2			II	P 1 e	-10	0
2890	tert-BUTYLPERBENZOATE with at least 50 per cent inert inorganic solid	5.2			II	P 1 a		
2891	tert-AMYL-PERNEODECANOATE with at least 25 per cent phlegmatizer	5.2			II	P 1 e	0	+10
2892	DIMYRISTYL PEROXYDICARBONATE, maximum concentration, 22 per cent, stable dispersion in water	5.2		121	II	P 1 a	+20	+25
						P20 a P24	+15	+25
						P 29	+10	+25
2893	LAUROYLPEROXIDE, maximum concentration 42 per cent, stable dispersion in water	5.2			II	P 1 a P 20 a P 24		
2894	BIS-(4-tert-BUTYLCYCLOHEXYL)PEROXYDICARBONATE, maximum 42 per cent, stable dispersion in water	5.2			II	P 1 a P 20 a P 24	+25	+30

SUBSTANCE or ARTICLE		HAZARDS			PACKING		CONTROL TEMPERATURE (°C)	EMERGENCY TEMPERATURE (°C)
NUMBER	DESIGNATION	CLASS DIVISION	SUBSIDIARY RISKS	SPECIAL PROVISIONS	GROUP	METHOD		
2895	DICETYL PEROXYDICARBONATE, maximum concentration 42 per cent, stable dispersion in water	5.2			II	P 1 a P 20 a P 24	+25	+30
2896	CYCLOHEXANONEPEROXIDE(s), maximum 72 per cent as a paste with not more than 9 per cent available oxygen	5.2	I	72	II	P 1 a P 2 c P 3 b P 6 a P 16 P 22 a P 25 b		
2897	1,1-BIS-(tert-BUTYLPEROXY)CYCLOHEXANE, with at least 50 per cent phlegmatizer	5.2			II	P 1 a		
2898	tert-AMYLPEROXY-2-ETHYLHEXANOATE, technical pure	5.2			II	P 1 e	+20	+25
2899	ORGANIC PEROXIDES, n.o.s., trial quantities	5.2		122				
2900	INFECTIOUS SUBSTANCES, NON-HUMAN, n.o.s.	6.2		109 125				
2901	BROMINE CHLORIDE	2	6.1					
2902	PESTICIDES, LIQUID, TOXIC, n.o.s.	6.1		61 109				
2903	PESTICIDES, LIQUID, TOXIC, INFLAMMABLE, n.o.s.	6.1	3	61 109				
2904	CHLOROPHENATES, LIQUID	8			III			

SUBSTANCE or ARTICLE		HAZARDS			PACKING		CONTROL TEMPERATURE (°C)	EMERGENCY TEMPERATURE (°C)
NUMBER	DESIGNATION	CLASS DIVISION	SUBSIDIARY RISKS	SPECIAL PROVISIONS	GROUP	METHOD		
2905	CHLOROPHENATES, SOLID	8			III			
2906	TRIISOCYANATOISOCYANURATE OF ISOPHORONE DIISOCYANATE (70 per cent, by weight, solution)	3			III			
2907	ISOSORBIDE DINITRATE MIXTURE containing at least 60 per cent LACTOSE, MANNOSE, STARCH, or CALCIUM HYDROGEN PHOSPHATE	4.1		127	II			
2908	RADIOACTIVE MATERIAL, empty packages, schedule 1	7		128				
2909	RADIOACTIVE MATERIAL, ARTICLES MANUFACTURED FROM NATURAL or DEPLETTED URANIUM or NATURAL THORIUM, schedule 2	7		128				
2910	RADIOACTIVE MATERIAL, small quantities, schedule 3	7		128				
2911	RADIOACTIVE MATERIAL, INSTRUMENTS and ARTICLES, schedule 4							
2912	RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA)I, schedule 5	7		128				
2913	RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA)II, schedule 6	7		128				
2914	RADIOACTIVE MATERIAL, LOW LEVEL SOLIDS (LLS), schedule 7	7		128				
2915	RADIOACTIVE MATERIAL, TYPE A PACKAGES, schedule 8	7		128				
2916	RADIOACTIVE MATERIAL, TYPE B(U) PACKAGES, schedule 9	7		128				
2917	RADIOACTIVE MATERIAL, TYPE B(M) PACKAGES, schedule 10	7		128				

SUBSTANCE or ARTICLE		HAZARDS			PACKING		CONTROL TEMPERATURE (°C)	EMERGENCY TEMPERATURE (°C)
NUMBER	DESIGNATION	CLASS DIVISION	SUBSIDIARY RISKS	SPECIAL PROVISIONS	GROUP	METHOD		
2918	RADIOACTIVE MATERIAL, FISSILE CLASS I, II or III, schedule 11	7		128				
2919	RADIOACTIVE MATERIAL, SPECIAL ARRANGEMENTS, schedule 12	7		128				
2920	CORROSIVE, INFLAMMABLE LIQUIDS, n.o.s.	8	3	130				
2921	CORROSIVE, INFLAMMABLE SOLIDS, n.o.s.	8	4.1	130				
2922	CORROSIVE, POISONOUS (toxic) LIQUIDS, n.o.s.	8	6.1	129				
2923	CORROSIVE, POISONOUS (toxic) SOLIDS, n.o.s.	8	6.1	129				
2924	FLAMMABLE, CORROSIVE LIQUIDS, n.o.s.	3	8	129				
2925	FLAMMABLE, CORROSIVE SOLIDS, n.o.s.	4.1	8	129				
2926	FLAMMABLE, POISONOUS (toxic) SOLIDS, n.o.s.	4.1	6.1	129				
2927	POISONOUS (toxic), CORROSIVE LIQUIDS, n.o.s.	6.1	8	130				
2928	POISONOUS (toxic), CORROSIVE SOLIDS, n.o.s.	6.1	8	130				
2929	POISONOUS (toxic), INFLAMMABLE LIQUIDS, n.o.s.	6.1	3	130				
2930	POISONOUS (toxic), INFLAMMABLE SOLIDS, n.o.s.	6.1	4.1	130				

(2) Amendments to existing entries

Insert special provision 109 for the entries (n.o.s.):

1078	1168	1224	1228	1268	1345	1371	1372	1373	1375	1383
1389	1390	1391	1392	1393	1409	1450	1461	1462	1477	1479
1481	1482	1483	1544	1549	1556	1557	1564	1583	1588	1601
1602	1610	1655	1681	1682	1693	1707	1719	1740	1759	1760
1851	1857	1953	1954	1955	1956	1964	1965	1967	1968	1986
1987	1988	1989	1992	1993	2003	2006	2024	2025	2026	2072
2206	2207	2255	2291	2319	2430	2588	2627	2693	2733	2734
2735	2742	2757	2758	2759	2760	2761	2762	2763	2764	2765
2766	2767	2768	2769	2770	2771	2772	2773	2774	2775	2776
2777	2778	2779	2780	2781	2782	2783	2784			

0042 - Read designation:

"BOOSTERS", without detonator"

0049)
0050) Replace existing packing method by "E 20"

0075 - Replace existing packing method by "E 103"

0088 - Delete

0110 - Read designation:

"GRENADES, PRACTICE, hand or rifle"

0143 - Replace existing packing method by "E 103"

0186 - Replace existing packing method by "E 146"

0196)
0197) Replace existing packing method by "E 150"

0206 - Replace existing packing method by "E 141"

0214 - Read designation:

"TRINITROBENZENE, dry or containing, by weight, less than 30 per cent water"

0219 - Read designation:

" TRINITRORESORCINOL (STYPHNIC ACID), dry or containing, by weight, less than 20 per cent water (or mixture of alcohol and water)"

0221 - Replace existing packing method by "E 106"

0225)
0268) Delete the word "(gaines)" from the designation

0280)
0281) Replace existing packing method by "E 146"

0283 - Delete the word "(gaines)" from the designation

0286)
0287) Replace existing packing method by "E 106"

0313 - Replace existing packing method by "E 150"

0318 - Read designation:

"GRENADES, PRACTICE, hand or rifle"

0335)
0336)
0337) Replace existing packing methods by "E 130"
0340)
0341)

0342)
0343) Add special provision "105"

0360)
0361) Replace existing packing method by "E 105 A"

0369)
0370) Replace existing packing method by "E 106"
0371)

1031 - Delete

1035 - Read designation:

"ETHANE, compressed"

1038 - Add subsidiary risk "3"

1045 - Read:

"FLUORINE, compressed 2 5.1 - - - - - "
6.1

1049 - Read:

"HYDROGEN, compressed 2 3 - - - - - "

1057 - Add subsidiary risk "3"

1060 - Read designation:

"METHYL ACETYLENE-PROPADIENE MIXTURES, stabilized"

1067 - Add subsidiary risk "5.1"
Delete subsidiary risk "8"

1070 - Read designation:

"NITROUS OXIDE, compressed"

1082 - Read:

"TRIFLUOROCHLOROETHYLENE,
inhibited 2 3 - - - - - "

1085 - Add subsidiary risk "3"

1095)
1096) Delete

1099 - Add subsidiary risk "6.1"

1120 - Read:

"BUTANOLS 3 - 102 - M - - "

1121)
1122) Delete

1123 - Read designation:

"BUTYL ACETATES"

1124 - Delete

1143 - Replace existing packing group by "II"

1153 - Read designation:

"ETHYLENE GLYCOL DIETHYL ETHER (1,2-Diethoxyethane)"

1167 - Read designation:

"DIVINYL ETHER, inhibited"

1169 - Add special provision "102"
Delete packing method

1170 - Read:

"ETHANOL (Ethyl alcohol) and its
solutions including alco-
holic beverages 3 - 102 - M - - "

1171 - Read designation:

"ETHYLENE GLYCOL MONOETHYL ETHER (2-Ethoxyethanol)"

1172 - Read designation:

"ETHYLENE GLYCOL MONOETHYL ETHER ACETATE (2-Ethoxyethanol acetate)"

1184 - Add subsidiary risk "6.1"

1197 - Add subsidiary risk "102"
Delete packing method

1210 - Read designation:

1259 - Read:

"NICKEL CARBONYL	6.1	3	-	I	-	-	-	"

1295 - Read:

"TRICHLOROSILANE	4.2	4.3 8	-	I	-	-	-	"

1310 - Read designation:

"AMMONIUM PICRATE, WETTED with, by weight, at least 10 per cent water"

1320 - Read designation:

"DINITROPHENOL, WETTED with, by weight, at least 15 per cent water"

1321 - Read designation:

"DINITROPHENOLATES, WETTED with, by weight, at least 15 per cent water"

1322 - Read designation:

"DINITRORESORCINOL, WETTED with, by weight, at least 15 per cent water"

1326 - Read designation:

"HAFNIUM METAL POWDER, WET with not less than 25 per cent water (a visible excess of water must be present)
(a) Mechanically produced, having a particle size less than 53 microns;
(b) Chemically produced, having a particle size less than 840 microns"

1336 - Read designation:

"NITROGUANIDINE (Picrite) WETTED with, by weight, at least 20 per cent water"

1337 - Read designation:

"NITROSTARCH, wetted with, by weight, at least 20 per cent water"

1344 - Read designation:

"TRINITROPHENOL (Picric acid), WETTED with, by weight, at least 30 per cent water"

1347 - Read designation:

"SILVER PICRATE, WETTED with, by weight, at least 15 per cent water"

1348 - Read designation:

"SODIUM DINITRO-ORTHOCRESOLATE, WETTED with, by weight, at least 15 per cent water"

1349 - Read designation:

"SODIUM PICRAMATE, WETTED with, by weight, at least 20 per cent water"

1354 - Read designation:

"TRINITROBENZENE, WETTED with, by weight, at least 30 per cent water"

1355 - Read designation:

" TRINITROBENZOIC ACID, WETTED with, by weight, at least 30 per cent water"

1356 - Read designation:

"TRINITROTOLUENE (TNT), WETTED with, by weight, at least 30 per cent water"

1357 - Read designation:

"UREA NITRATE, WETTED with, by weight, at least 20 per cent water"

1374 - Read:

"FISH MEAL (Fish scrap), UNSTABILIZED 4.2 - - II - - -"

1375 - Read:

"FUEL PYROPHORIC, n.o.s. 4.2 - 109 I - - -"

1380 - Add subsidiary risk "6.1"

1391 - Read:

"ALKALI and ALKALI EARTH METAL DISPERSIONS, n.o.s. 4.3 - 109 I - - -"

1397 - Read:

"ALUMINIUM PHOSPHIDE 4.3 6.1 - I - - -"

1406 - Delete synonym between brackets

1417 - Read designation:

"LITHIUM SILICON"

1464)
1480) Delete

1517 - Read designation:

"ZIRCONIUM PICRAMATE, WETTED with, by weight, at least 20 per cent water"

1542 - Delete

1571 - Read:

"BARIUM AZIDE, WETTED with, by weight, at least 50 per cent water 4.1 6.1 - I - - -"

1602 - Read:

"DYES and DYE INTERMEDIATES, TOXIC, n.o.s. 6.1 - 44 109 - - - -"

1609 - Delete

1612 - Read:

"HEXAETHYL TETRAPHOSPHATE and compressed gas mixtures	2	6.1	-	-	-	-	- "

1648 - Read:

"METHYL CYANIDE (Acetonitrile)	3	6.1	-	II	-	-	- "

1668)
1682) Delete

1703 - Read:

"TETRAETHYL DITHIOPYROPHOSPHATE, with gases, including solutions and mixtures thereof	2	6.1	-	-	-	-	- "

1705 - Read:

"TETRAETHYL PYROPHOSPHATE and compressed gas mixtures	2	6.1	-	-	-	-	- "

1714 - Read:

"ZINC PHOSPHIDE	4.3	6.1	-	I	-	-	- "

1716 - Replace existing packing group by "II"

1717 - Read:

" ACETYL CHLORIDE	3	8	-	II	-	-	- "

1718 - Read designation:

"BUTYL ACID PHOSPHATE"

1723 - Read:

"ALLYL IODIDE	3	8	-	I	-	-	- "

1727 - Read designation:

"AMMONIUM HYDROGEN FLUORIDE, solid" and delete synonym between brackets

1734)
1735) Delete

1738 - Add subsidiary risk "8"

1745 - Read:

"BROMINE PENTAFLUORIDE	5.1	6.1 8	-	I	-	-	- "

1746 - Read:

"BROMINE TRIFLUORIDE	5.1	6.1 8	-	I	-	-	-	"

1749 - Delete subsidiary risk "8"

1759 - Read:

" CORROSIVE SOLIDS, n.o.s.	8	-	109 112	-	-	-	-	"

1760 - Read:

" CORROSIVE LIQUIDS, n.o.s.	8	-	109 112	-	-	-	-	"

1767 - Add subsidiary risk "3"

1810 - Read designation:

"PHOSPHORUS OXYCHLORIDE (Phosphoryl chloride)"

1812 - Delete subsidiary risk "8"

1815 - Read:

"PROPIONYL CHLORIDE	3	8	-	II	-	-	-	"

1819 - Delete special provision "54"

1821 - Read:

"SODIUM HYDROGEN SULPHATE, SOLID	8	-	-	II	-	-	-	"

1826 - Read:

"ACID MIXTURES (Nitrating acid), spent	8	-	53 113	-	-	-	-	"

1832 - Add special provision "113"

1842)
1852) Delete

1860 - Add subsidiary risk "3"

1866 - Read designation:

" RESIN SOLUTION in inflammable liquid, with a flash point below 32°C"

1891 - Read designation:

"ETHYL BROMIDE (Bromoethane)"

1896 - Read:

"ACETYL IODIDE	3	6.1	-	I	-	-	-	"

1953)
1954) Add subsidiary risk "3"

1962 - Read designation:

"ETHYLENE, compressed"

1966 - Read designation:

"HYDROGEN, refrigerated liquid"

1990 - Delete

1992 - Read:

"INFLAMMABLE LIQUIDS, TOXIC, n.o.s.	3	6.1	109 130	-	M	-	- "

1993 - Read:

"INFLAMMABLE LIQUIDS, NON-TOXIC, n.o.s.	3	-	102 109	-	M	-	- "

1994 - Read:

"IRON PENTACARBONYL	6.1	3	-	I	-	-	- "

1997)
1998) Delete

2008 - Replace existing special provision by "115"

2020 - Read designation:

"CHLOROPHENOLS, SOLID"

2021 - Read designation:

"CHLOROPHENOLS, LIQUID"

2029 - Read:

"HYDRAZINE, ANHYDROUS and its aqueous solutions, containing more than 64 per cent, by weight, hydrazine	3	6.1 8	-	I	-	-	- "

2030 - Delete special provision"67"

2032 - Add subsidiary risks "5.1" and "6.1"

2037)
2044) Add subsidiary risk "3"

2046 - Read:

"CYMENES 3 - - III M - -"

2065)
2066) Delete

2080 - Delete subsidiary risk "E"

2082 - Add emergency temperature "0°C"

2083 - Add emergency temperature "0°C"

2084 - Add control and emergency temperatures "+20°C and +25°C"

2085 - Delete packing method "P 13 b"

2086 - Delete

2088 - Read:

"BENZOYL PEROXIDE , more than 77 per cent but less than 95 per cent with water 5.2 E 82 I P 1 d
P 13 b "

2089 - Delete subsidiary risk "E"

2090 - Delete special provision "93" and packing method "P 1 d"

2092 - Add special provision "94"

2093 - Delete special provision 94 and packing method "P 25 b"

2094 - Add subsidiary risk "I"

2095 - Amend packing method "P 1 d" to read "P 1 c"

2096 - Delete packing method "P 1 b"

2101 - Add packing method "P 20 c"

2102 - Read designation:

"DI-tert-BUTYL PEROXIDE (tert-BUTYL PEROXIDE), technical pure"
Delete packing method "P 22 a"

2104 - Delete packing method "P 1 b"

2105 - Add packing method "P 20 c"

2106 - Read designation:

"DI-(tert-BUTYLPEROXY) PHTHALATE, technical pure"

Delete packing method "P 1 b"

2107 - Read designation:

"DI-(tert-BUTYLPEROXY) PHTHALATE, maximum concentration 55 per cent in solution"

2108 - Read designation:

"DI-(tert-BUTYLPEROXY) PHTHALATE, maximum 55 per cent as a paste"

Add packing method "P 20 c"

2110 - Add emergency temperature "+10°C"

2111 - Delete packing method "P 1 b"

2112 - Add packing method "P 20 c"

2113 - Delete packing method "P 1 d"

2114 - Add special provision 72
Amend packing method "P 3 c" to read "P 2 c"
Add packing method "P 20 c"

2115 - Delete packing method "P 1 f"

2116 - Delete packing methods "P 1 b, P 2 d and P 22 a"

2117 - Add packing group "I"

2118 - Read designation:

"CYCLOHEXANONE PEROXIDE(S), maximum 72 per cent in solution and with not more than 9 per cent available oxygen"

Delete special provision "96", packing group "II" and packing method "P 1 g"

2119 - Delete packing method "P 1 c"
Amend packing method "P 2 c" to read "P 2 d"

2120 - Delete packing method "P 20 c"
Amend packing method "P 25" to read "P 25 a"
Add emergency temperature "+20°C"

2121 - Delete packing method "P 2 b"

2122 - Add emergency temperature "-10°C"

2123 - Add emergency temperature "-5°C"

2124 - Delete packing method "P 20 c"

2125 - Add subsidiary risk "I"
Delete packing methods "P 22 a and P 25 b"

2126 - Add subsidiary risk "I"
Delete Packing method "P 1 b"

2127 - Delete special provision "98" and packing method "P 1 b"

2128 - Read designation:

"BIS-(3,5,5-TRIMETHYLHEXANOYL) PEROXIDE, technical pure or in solution"

Delete packing method "P 1 e"

Add emergency temperature "+10°C"

2129 - Add emergency temperature "+15°C"

2130 - Read designation:

"DI-n-NONANOYL PEROXIDE (Pelargonyl peroxide), technical pure"

Add emergency temperature "+10°C"

2131 - Delete packing methods "P 1 d, P 1 g, P 3 b, P 4 a and P 5"

2132 - Add control and emergency temperatures "+15°C and +20°C"

2133 - Add packing group "II"

Amend packing method "P 2" to read "P 2 g"

Add emergency temperature "-5°C"

2134 - Add emergency temperature "0°C"

2135 - Amend packing method "P 1 c" to read "P 1 d"

2137 - Delete packing methods "P 1 d and P 1 f"

2140 - Add emergency temperature "+20°C"

2143 - Read designation:

"tert-BUTYL PER-(2-ETHYL) HEXANOATE, technical pure"

Delete packing method "P 1 e"

Add emergency temperature "+25°C"

2144 - Add control and emergency temperatures "+20°C and +25°C"

2148 - Add packing method "P 20 c"

2149 - Add emergency temperature "+30°C"

2150 - Amend packing method "P 1 c" to read "P 1 d" and delete packing method "P 1 g"

Add emergency temperature "-10°C"

2151 - Delete subsidiary risk "2", "-10°C" in column special provisions and packing method "P 1 e"

Add control and emergency temperatures "-15°C and -5°C"

2152 - Amend packing method "P 1 c" to read "P 1 d"

Add emergency temperature "+10°C"

2153 - Add emergency temperature "+10°C"

2154 - Add packing method "P 20 c"

Add emergency temperature "+35°C"

2155 - Delete packing method "P 1 e"

2157 - Delete packing method "P 1 e"

Add emergency temperature "+25°C"

2161 - Read designation:

"1,1,3,3-TETRAMETHYL BUTYLPEROXY-2-ETHYL HEXANOATE, technical pure"

Amend packing group "I" to read "II"

Add emergency temperature "+25°C"

2162 - Add subsidiary risk "I"

Delete packing methods "P 22 a and P 25 b"

2163 - Add emergency temperature "+35°C"

2164 - Add emergency temperature "+25°C"

2165 - Amend packing method "P 1 c" to read "P 1 d"

2169 - Delete "-10°C" under column of special provisions

Add control and emergency temperatures "-15°C and -5°C"

2170 - Add emergency temperature "+10°C"

2171 - Delete special provision "89"

Delete packing methods "P 22 a and P 25 b"

2172 - Amend packing method "P 1 c" to read "P 1 d"

Add packing method "P 20 c"

2173 - Amend packing method "P 1 c" to read "P 1 d"

Add packing method "P 20 c"

2174 - Amend packing method "P 1 c" to read "P 1 d"

2175 - Add emergency temperature "0°C"

2176 - Add emergency temperature "-15°C"

2177 - Delete "+5°C" under column special provisions

Add control and emergency temperatures "0°C and +10°C"

2180 - Add subsidiary risk "E"

2182 - Delete packing method "P 1 g"

Add emergency temperature "-10°C"

2191 - Add subsidiary risk "6.1"

2212 - Read designation:

"BLUE ASBESTOS (Crocidolite)"

2216 - Read:

"FISH MEAL (Fish scrap), stabilized 9 - 29 III - - -"
117

2225 - Amend Division "6.1" to Class "8"

2255 - Read:

"ORGANIC PEROXIDES, n.o.s.,
samples 5.2 - 77 I P 1 i - -"

2265 - Amend Division "6.1" to Class "3"

2269 - Read designation:

"3,3'-IMINO-BIS-PROPYLAMINE (Dipropylene triamine, bis-Aminopropylamine)"

2286 - Read designation:

"PENTAMETHYLHEPTANE (Isododecane)"

2315 - Amend packing group "III" to read "II"

2322 - Amend packing group "III" to read "II"

2327 - Read designation:

"TRIMETHYL-HEXAMETHYLENEDIAMINES"

2328 - Amend packing group "II" to read "III"

2337 - Read:

"PHENYL MERCAPTAN (Benzenethiol,
Thiophenol) 6.1 3 - I - - - "

2347 - Read designation:

"BUTYL MERCAPTAN (Butane-1-thiol)"

2352 - Read designation:

"BUTYL VINYL ETHER, inhibited"

2363 - Add subsidiary risk "6.1"
Amend packing group "I" to read "II"

2437 - Amend class "8" to read "3"

2438 - Read designation:
"TRIMETHYL ACETYL CHLORIDE (Pivaloyl chloride)"
Add subsidiary risk "3"

2441 - Read designation:
"TITANIUM TRICHLORIDE and mixtures, pyrophoric"

2465 - Read designation:
"DICHLOROISOCYANURIC ACID, DRY and its salts"
Amend packing group "I" to read "II"

2467 - Read designation:
"SODIUM PERCARBONATES"
Add special provision "126"

2468 - Read designation:
"TRICHLOROISOCYANURIC ACID, DRY"
Amend packing group "I" to read "II"

2470 - Read designation:
"PHENYLACETONITRILE (Benzyl cyanide), LIQUID"

2476 - Delete

2478 - Read:

"ISOCYANATES and their solutions with a flash point of less than 23°C (73°F), n.o.s.	3	6.1	-	II	-	-	-"

2504 - Read designation:
"TETRABROMOETHANE (Acetylene tetrabromide)"

2506)
2509) Amend packing group "III" to read "II"

2517 - Read designation:
"CHLORODIFLUOROETHANES (Difluoromonochloroethanes)"
Add subsidiary risk "3"

2537)
2539) Delete

2545 - Amend special provision "79" to read "115"

2546 - Amend special provision "80" to read "115"

2550 - Amend packing group "II" to read "I"
Delete packing method "P 1 e"

2551 - Delete special provision "98"

2558 - Read designation:

"EPIBROMOHYDRIN (1-Bromo-2,3-epoxypropane)"

2559 - Delete

2562 - Read designation:

"tert-BUTYL PERISOBUTYRATE, maximum 52 per cent in solution"

Add emergency temperature "+20°C"

2563 - Add subsidiary risk "1"

Delete special provision "97"

2568)
2569) Delete

2570 - Add special provision "44"

Delete packing group "III"

2573 - Amend division "6.1" to read "5.1"

Amend subsidiary risk "5.1" to read "6.1"

2575 - Delete

2593 - Add emergency temperature "+35°C"

2594 - Add emergency temperature "+5°C"

2595 - Add emergency temperature "+25°C"

2597 - Add emergency temperature "+35°C"

2618 - Add packing group "III"

2698 - Read designation:

"TETRAHYDROPHTHALIC ANHYDRIDES"

Add special provision "29"

2702 - Delete

2709 - Read designation:

"BUTYLBENZENES"

2737 - Delete

2754 - Read designation:

"N-ETHYLTOLUIDINES"

2755 - Read designation:

"3-CHLOROPEROXYBENZOIC ACID, maximum 86 per cent"

UNITED NATIONS

SECRETARIAT

ST

ST/SG/AC.10/[illegible]/Add.2/Corr.1
17 October 1979

ENGLISH
Original: ENGLISH/FRENCH

COMMITTEE OF EXPERTS ON THE TRANSPORT OF DANGEROUS GOODS

REPORT OF THE SUBCOMMITTEE OF EXPERTS ON ITS TENTH SESSION
(4-13 December 1978)

Addendum 2 - Corrigendum 1

Annex 2

Chapter [illegible]. LIST OF DANGEROUS GOODS (NOT EXHAUSTIVE) CARRIED

Amendments adopted by the Committee

At the beginning under the title insert a third paragraph to read:

"The Committee also decided to add a symbol M in the column Packing Method in front of all goods allowed for transport by multimodal tank-containers, mentioned in chapter [illegible]."

/Pages [illegible]

Amend "n.o.s." to read "N.O.S." throughout.

UN entry 0401 should read

DIPICRYL SULFIDE, WETTED with, by weight, less than 10 per cent water

UN entry 2786 should read

ORGANOTIN PESTICIDES (compounds or preparations), toxic, N.O.S.

UN entry 2787 should read

ORGANOTIN PESTICIDES (compounds and preparations), LIQUID, toxic, N.O.S., with a flash point below 38 °C

UN entry 2789 should read

ACETIC ACID, GLACIAL or over 80 per cent SOLUTION by weight

UN entry 2790 should read

ACETIC ACID exceeding 10 per cent but not exceeding 80 per cent SOLUTION by weight

UN entry 2791 should read

AIRCRAFT THRUST DEVICE for assisted take-off

GE.79.23904

UN entry 2792 should read

IGNITER FOR AIRCRAFT THRUST DEVICE for assisted take-off

UN entry 2793 should read

FERROUS METAL BORINGS, SHAVINGS, TURNINGS or CUTTINGS, in a form liable to self-heating

UN entry 2795 (not applicable to English text)

For alkali read alcalin

UN entry 2800 should read

BATTERIES, electric, storage (Accumulateurs électriques), WET, of the NON-SPILLABLE type

UN entry 2803 should read

GALLIUM, metal

UN entry 2809 should read

MERCURY, metal

UN entry 2814 should read (not applicable to English text)

MATIERES INFECTIEUSES D'ORIGINE HUMAINE, N.S.A.

UN entry 2817 should read (not applicable to English text)

BIFLUORURE D'AMMONIUM (Fluoride acide d'ammonium) EN SOLUTION

UN entry 2831 should read (not applicable to English text)

TRICHLORETHANE-1,1,1 (Méthyl chloroforme)

UN entry 2834 should read (not applicable to English text)

For ORTHOPHOSPHORIQUE read ORTHOPHOSPHOREUX

UN entry 2837 should read (not applicable to English text)

HYDROGENOSULFATE DE SODIUM (Sulfate acide de sodium), EN SOLUTION

UN entry 2858 should read

ZIRCONIUM, metal, DRY, ...

UN entries 2886, 2887 and 2888 should read

tert-BUTYL PEROXY-2-ETHYLHEXANOATE ...

UN entry 2891 should read

tert-AMYL-PER-neo-DECANOATE ...

UN entry 2893 should read

LAUROYL PEROXIDE, ...

UN entry 2896 should read

CYCLOHEXANONE PEROXIDE(S)

UN entry 2899 should read

ORGANIC PEROXIDES, N.O.S., TRIAL QUANTITIES

UN entry 2900 should read (not applicable to English text)

MATIERES INFECTIEUSES, D'ORIGINE NON HUMAINE, N.S.A.

UN entry 1049 should read

HYDROGEN, COMPRESSED

UN entry 1060 should read

METHYL ACETYLENE-PROPADIENE MIXTURE, STABILIZED

UN entry 1070 should read

NITROUS OXIDE, COMPRESSED

UN entry 1082 should read

TRIFLUOROCHLOROETHYLENE, INHIBITED

UN entry 1167 should read

DIVINYL ETHER, INHIBITED

UN entry 1169:

For method read group

UN entry 1170 should read

ETHANOL (Ethyl alcohol) and its SOLUTIONS including ALCOHOL, DENATURED

UN entry 1171 (not applicable to English text)

Synonyms should read

Ethoxy-2 ethanol

UN entry 1172 (not applicable to English text)

Synonyms should read

Acétate d'éthoxy-2 éthanol, acétate d'éthoxy-2 éthyle, Acétate d'éthyl-glycol

UN entry 1197 should read

Add special provision [ ]

Delete packing group

UN entry 1337 should read

NITROSTARCH, WETTED with, by weight, at least 20 per cent water

UN entry 1347 should read

SILVER PICRATE, WETTED with, by weight, at least 30 per cent water

UN entry 1391 should read (not applicable to English text)

For ALCALINO-FERREUX read ALCALINO-TERREUX

UN entry 1611 should read

HEXAETHYL TETRAPHOSPHATE and COMPRESSED GAS MIXTURES

UN entry 1703 should read

TETRAETHYL DITHIOPYROPHOSPHATE, WITH GASES, including solutions and mixtures thereof

UN entry 2253 should read

ORGANIC PEROXIDES, N.O.S., SAMPLES

UN entry 2269

For bis-Aminopropylamine read Bis-aminepropylamine

UN entry 2352 should read

BUTYL VINYL ETHER, INHIBITED

UN entry 2441 should read

TITANIUM TRICHLORIDE and MIXTURES, PYROPHORIC

UN entry 2465 should read

DICHLOROISOCYANURIC Acid, DRY and its SALTS

UN entry 2478 should read

ISOCYANATES and their SOLUTIONS with a Flash point at least than , N.O.S.	3	6.1	109	II	-	-	-